

# **CNATRA PR-07 PROGRAM REVIEW**



***“Training Combat Quality Aviation  
Professionals”***

**28 October 2004**

# PROGRAMS

- **Undergraduate Flight Training**

- **Pilot Training Pipelines**

- **NFO Training Pipelines**

- **Aircrew Training Pipeline**

- **Unmanned Aerial Vehicle Training**

# STRATEGY ALIGNMENT

- **NETC Strategic Goals**

1. Align with fleet requirements
2. Full spectrum of learning opportunities
3. Responsive data-driven organization
4. Use HPSM to solve training deficiencies
5. Apply Science of Learning
6. Create culture of continuous learning

- **CNATRA Supporting Objectives**

1. Evolve aviation training methods and output to match fleet needs
2. Modernize training systems to improve training and reduce costs
  - Mid-life upgrades to T-45/T-44/TC-12/TH-57, TIMS
3. Improve metrics to validate improvements and cost effectiveness
  - NAPP / RPS / EIPM

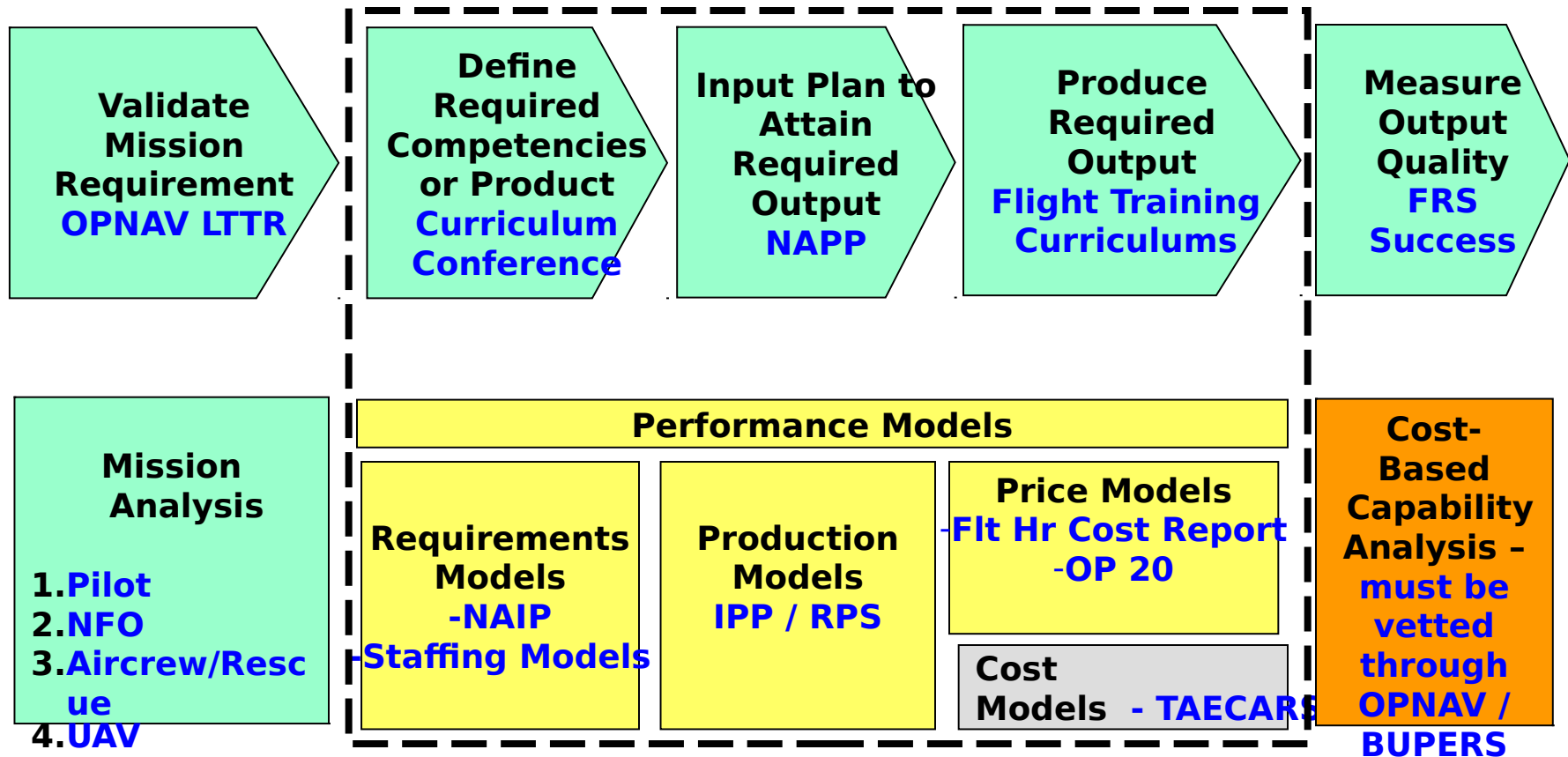
# STRATEGY ALIGNMENT

<b>NETC / CNATRA</b>	<b>Evolve Aviation Training</b>	<b>Modernize Training Systems</b>	<b>Improve Metrics</b>
<b>Align with fleet requirements</b>	<b>OPNAV determines flight hr. requirement Curriculum conferences w/ fleet / FRS annually</b>	<b>Mid Life upgrade plan per CNO request planned or in work for each T/M/S</b>	<b>NAVAIR cost metrics show digital cockpits reduce sustainment cost (OM&amp;N dollars)</b>
<b>Full spectrum of learning opportunities</b>	<b>Electronic classrooms, part task trainers, simulators for students</b>	<b>Improved simulation in JPATS and multiengine program</b>	
<b>Responsive data driven organization</b>	<b>IFS / NIFS responsive to attrition</b>	<b>Training Information Managements System (TIMS)</b>	<b>NAPP, NIPDR, SNAPPI, ASR, RPS, PPF's, EIPM, Curriculum Review Process</b>
<b>Use HPSM to solve training deficiencies</b>		<b>HPSM to be employed in NFO training system development</b>	<b>Quality measures</b>
<b>Apply Science of Learning</b>	<b>SoL to be employed in NFO training system development</b>	<b>SoL to be employed in NFO training system development</b>	
<b>Create culture of continuous learning</b>	<b>Grad school opportunities for instructors and students</b>		

# ASSESSMENT APPROACH



## Identify and Assess Processes and Outputs of Key Business Sectors



## Evaluate Interdependencies of Business Sectors Via Modeling

# RESOURCES SUMMARY PROFILE

## USN (MPN, RPN, Civilian Manpower)

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
Required	1424	1379	1379	1379	1379	1379
Funded	1424	1379	1379	1379	1379	1379
Delta	0	0	0	0	0	0

- **Flight Training**
  - **Pilot**
  - **NFO**
- **Aircrew / Air Rescue Training**
- **UAV Training**
- **Schools Command**
- **SAR**
- **Flight Support**
- **CNATRA Staff**
- **Blue Angels**

# RESOURCES SUMMARY PROFILE

## O&MN Funding

By Appropriation	FY06	FY07	FY08	FY09	FY10	FY11
<b>O&amp;MN (3B2K)</b>						
Required	\$416.9M	\$432.4M	\$442.8M	\$467.0M	\$480.3M	\$514.0M
Funded	\$351.1M	\$361.9M	\$364.1M	\$374.4M	\$384.4M	\$394.8M
Delta	<b>\$65.9M</b>	<b>\$70.5M</b>	<b>\$78.7M</b>	<b>\$92.6M</b>	<b>\$95.9M</b>	<b>\$119.2M</b>
<b>Other O&amp;MN</b>						
Required	\$25.2M	\$25.6M	\$26.1M	\$26.5M	\$27.2M	\$28.0M
Funded	\$24.6M	\$25.0M	\$25.4M	\$25.8M	\$26.6M	\$27.2M
Delta	<b>\$.6M</b>	<b>\$.6M</b>	<b>\$.7M</b>	<b>\$.7M</b>	<b>\$.6M</b>	<b>\$.8M</b>

### •CNATRA Funding

#### - Flight Training

- Pilot
- NFO

#### - Aircrew / Air Rescue

#### - SAR

#### - Schools Command

#### - Flight Support

### •Other O&MN Funding Executed by CNATRA

# **STATUS OF BUSINESS INITIATIVES**

- **Contract Efficiencies**
  - **\$10M saved over FYDP on NPA T-2/T-39/AIMD contract consolidation**
  - **Savings anticipated from T34/44 and T-6 Contract consolidation**
- **APN COTS Acquisitions Reduce O&MN expense**
  - **T-44 Visual Systems issue sheet submitted for PR 07**
- **Flight Training Support Center**
  - **Authorware conversion 60% complete (ILE)**
  - **TIMS implementation in FY 05**
- **Legacy Systems Reduction**
  - **H-3 SAR divestiture in work**
  - **T-2 Pilot training complete, NFO planned for FY 08**
  - **TIMS delays have increased IT costs in short run**
- **Increased Flight Simulation**
  - **Improved TC-12 Sims IOC Nov 04**
  - **T-44 Visual Systems issue sheet submitted**
  - **TH-57 sim upgrade in work**



# UNFUNDED ISSUES

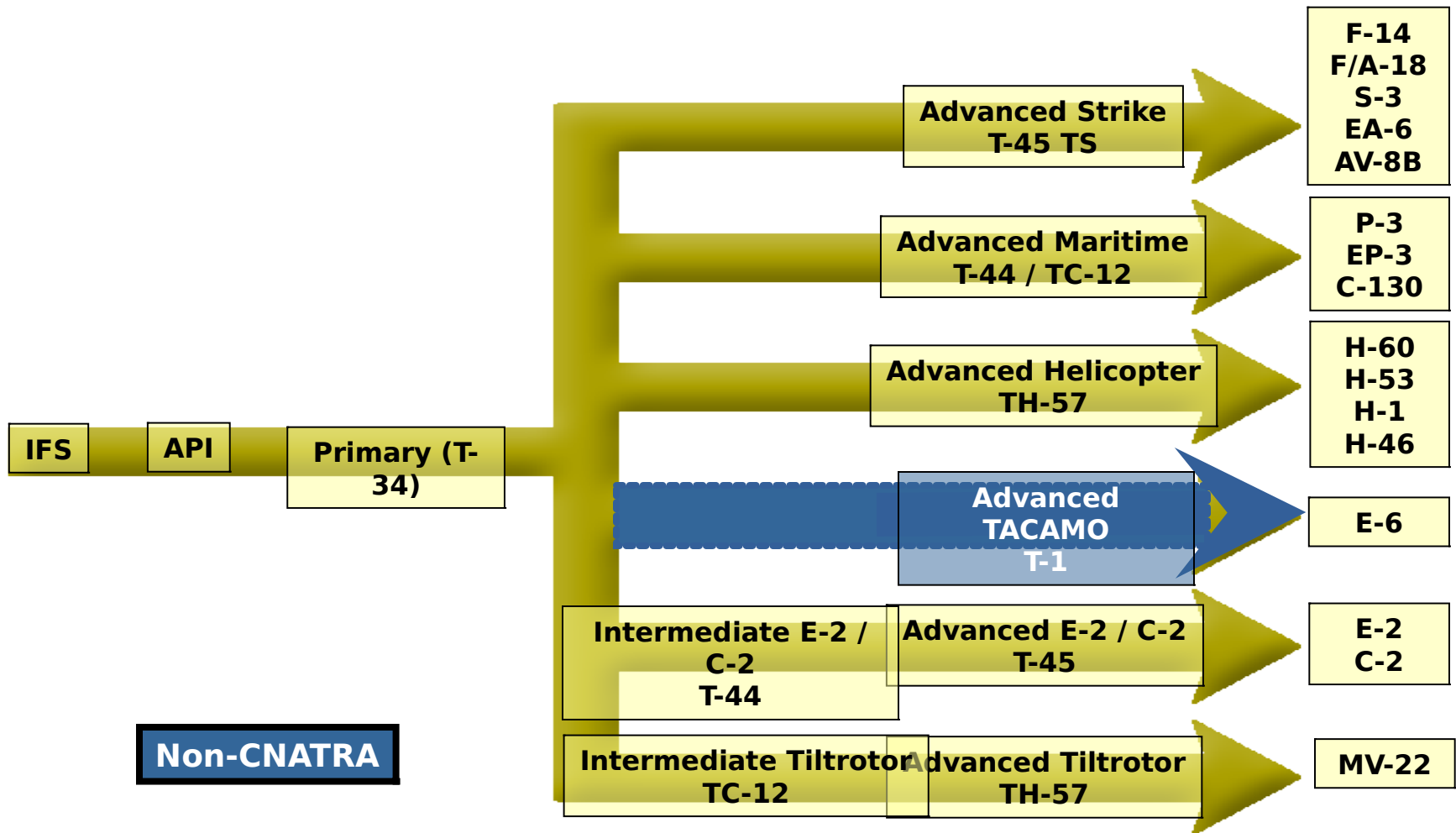
- **Issue 1: 3B2K Short Fall**
- **Issue 2: CNATRA 2004 OAG Priorities**
- **Issue 3: 3C1L Shortfall**
- **Issue 4: T45 Engine Stall**
- **Issue 5: IT Refresh**

**END OF BRIEF**

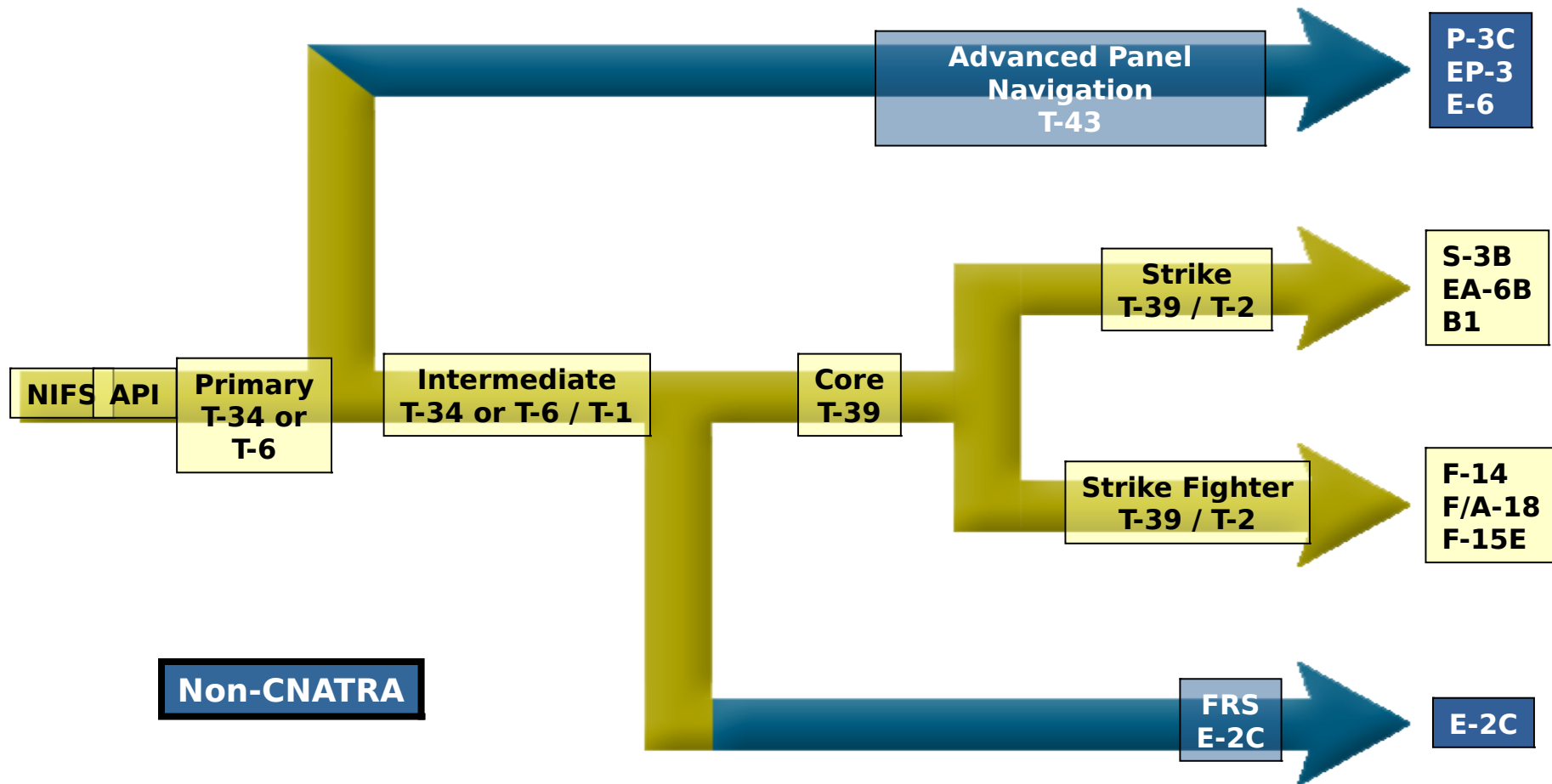


**LINKED SLIDES FOLLOW**

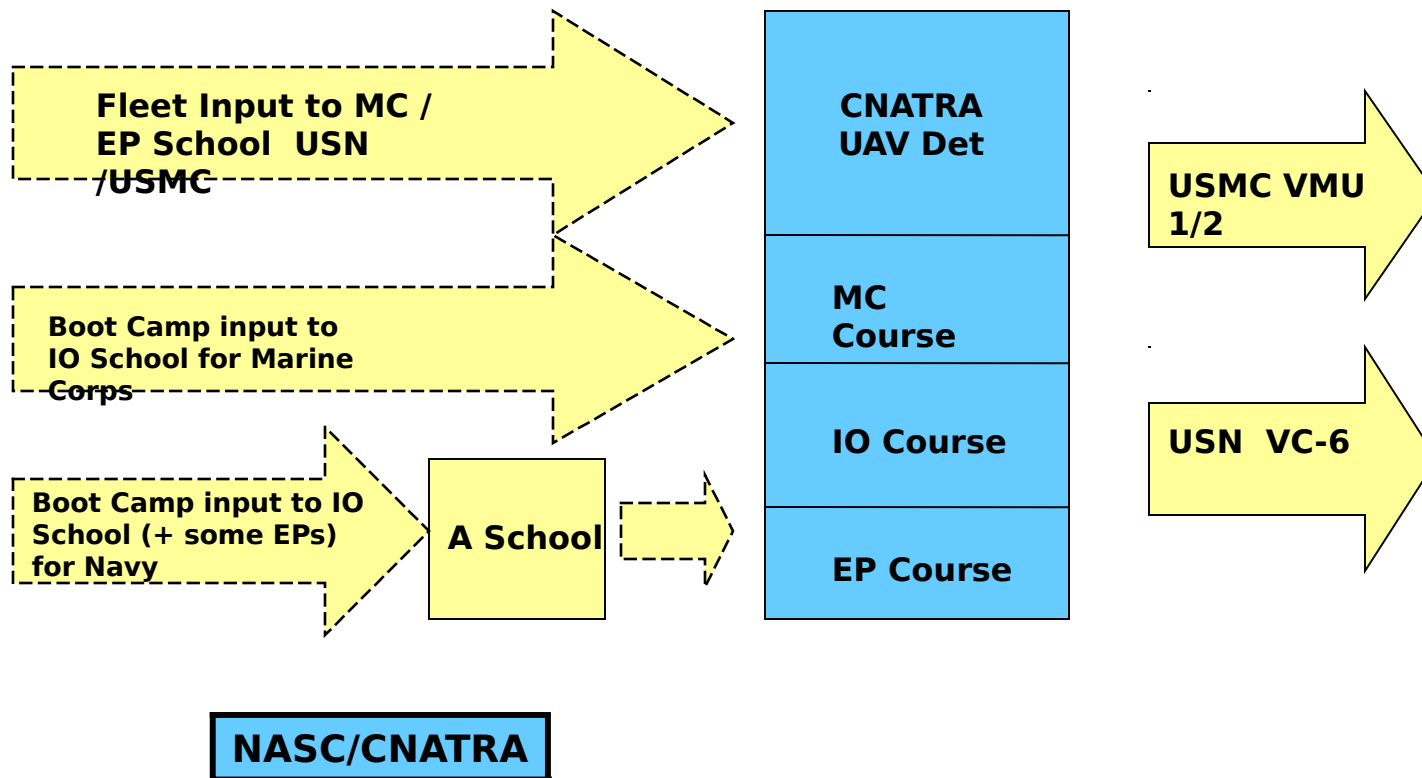
# PILOT TRAINING PIPELINES



# NFO TRAINING PIPELINES



# UAV Training Pipeline

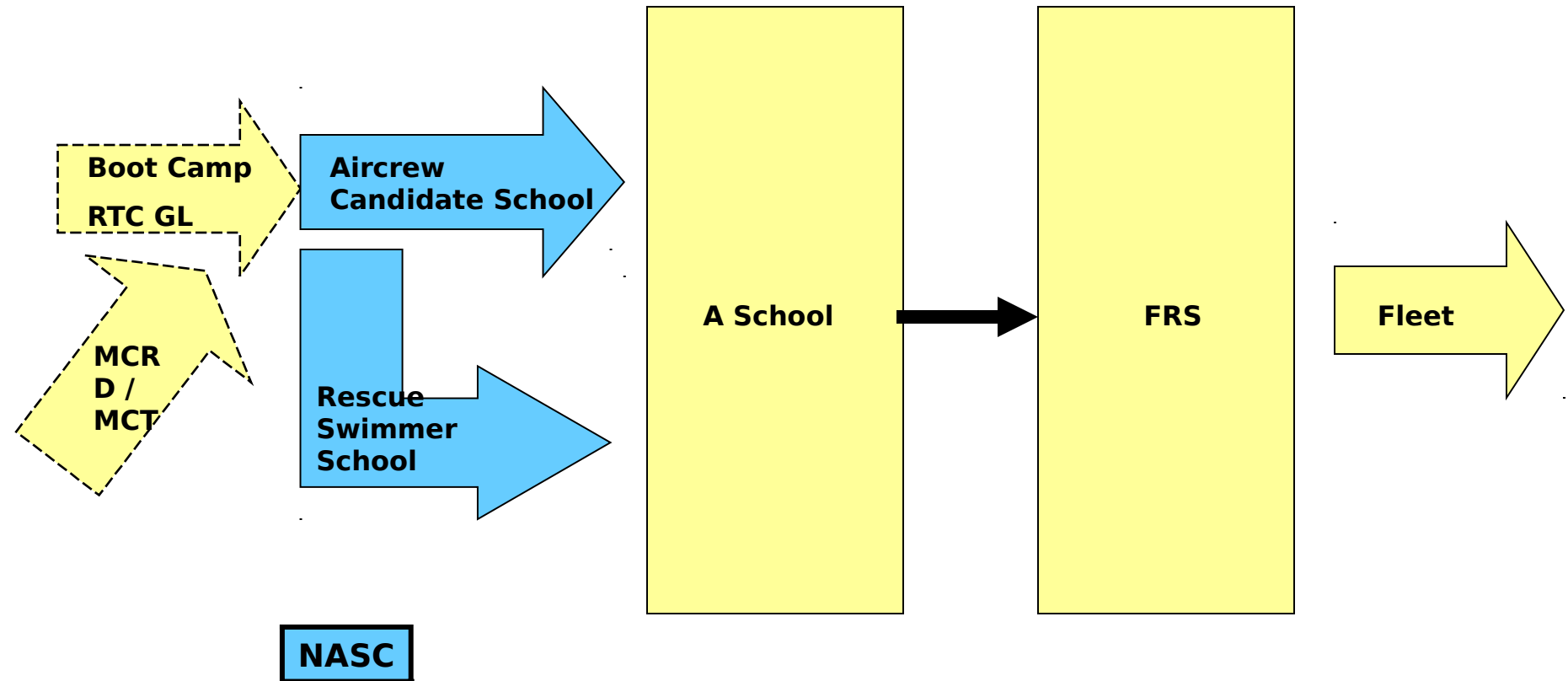


Mission Commander (MC) students are Officers

External Pilot (EP) and Internal Operator (IO) students are Enlisted personnel



# Aircrew Training Pipeline



# UNDERGRADUATE PILOT TRAINING

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## Analysis Results

- Validate **Mission Requirement**
- Define **Competencies** and Skill Sets
- Demand Basis for **Input Plan**
- Develop **Production** Capability
- Measure Output **Quality**




# VALIDATE MISSION REQUIREMENT 16

## Program Area - Undergraduate Pilot Training

**Requirement:  
2004**

**(a) CNO ltr 3500 SER N789F1/ Ser N789F1/3U635817 of 12 Apr**

**(b) OPNAVINST 3500.**

	<p><b>DEPARTMENT OF THE NAVY</b> OFFICE OF THE CHIEF OF NAVAL OPERATIONS 2000 NAVY PENTAGON WASHINGTON, D.C. 20350-2000</p> <p>IN REPLY REFER TO</p> <p>3500 Ser N782B5/4U790427 12 Apr 2004</p> <p>From: Chief of Naval Operations (N782B)</p> <p>Subj: FY-05 THROUGH FY-12 FLEET AVIATOR, CNATRA AND FLEET READINESS SQUADRONS (FRS) TRAINING REQUIREMENTS.</p> <p>Ref: (a) CNO ltr 3500 SER N789F1/ Ser N789F1/3U635817 of 24 Apr 2003 (b) OPNAVINST 3500.31G</p> <p>Encl: 1 through 20</p> <table><tr><td>(1) FLEET Requirement</td><td>(11) HH-60H</td></tr><tr><td>(2) PTR</td><td>(12) MH-60R</td></tr><tr><td>(3) NF0TR</td><td>(13) MH-60S</td></tr><tr><td>(4) F-14A/B/D</td><td>(14) SH-60B</td></tr><tr><td>(5) F/A-18C/D</td><td>(15) SH-60F</td></tr><tr><td>(6) F/A-18E/F</td><td>(16) UH-3H</td></tr><tr><td>(7) EA-6B/EA-18G</td><td>(17) MH-53E</td></tr><tr><td>(8) S-3</td><td>(18) E6B</td></tr><tr><td>(9) E-2/C-2</td><td>(19) USMC FRS Requirements</td></tr><tr><td>(10) P-3C</td><td>(20) F-35</td></tr></table> <p>1. Cancellation. This document supercedes reference (a).</p> <p>2. Enclosures (1-20) are the FY-05 through FY-12 Fleet Aviator requirement broken down by CNATRA training output and Type/Model FRS Training Output. These requirements are the result of extensive coordination between CNO (N782B) formerly N789, BUPERS, CNO N780 and HQMC. FRS categories are standardized IAW reference (b).</p> <p>3. This document serves three primary purposes:</p> <p>a) As a long term budget planning document to ensure effective budget planning and resource allocation during the development of resource sponsors Program Objective Memorandums (POM) or Program Reviews (PR).</p>	(1) FLEET Requirement	(11) HH-60H	(2) PTR	(12) MH-60R	(3) NF0TR	(13) MH-60S	(4) F-14A/B/D	(14) SH-60B	(5) F/A-18C/D	(15) SH-60F	(6) F/A-18E/F	(16) UH-3H	(7) EA-6B/EA-18G	(17) MH-53E	(8) S-3	(18) E6B	(9) E-2/C-2	(19) USMC FRS Requirements	(10) P-3C	(20) F-35
(1) FLEET Requirement	(11) HH-60H																				
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(10) P-3C	(20) F-35																				





## **Program Area - Undergraduate Pilot Training**

- **Overall Assessment**
  - Skill sets determined by FRS input training requirements
    - Close coordination w/ FRS maximizes Effectiveness
  - HPSM to be utilized in FY 05 Curriculum conferences
- **Improvement Opportunities**
  - Down load or upload of training is difficult when CNATRA/FRS funding is limited and from different sponsors
- **Risk**
  - Not executing cost effective training



## Program Area - Undergraduate Pilot Training

- **Overall Assessment**

- **Discuss Methodology Used to Project Inputs**

- *OPNAV N782 initiates the process by defining the training requirements. OPNAV N782 uses various manpower models (e.g., NAIP Model, CSR Model) and coordination with BUPERS, and CMC to determine annual requirements for each type of pilot, NFO, and NAC required to fill fleet demands. The multi-year training requirement reflects current and proposed fleet force structure, CNO/CMC manning policies, and squadron crew experience mix requirements.*

- **Projected Workload**

- **Improvement Opportunities**

- **NAIP / NAPP Models are fairly mature**
  - **Accessions need fine tuning**

- **Risk**

- **Risks of Inaccurate Input Projections**

- **Excess capacity, under utilization of resources**
    - **Low risk as NAIP model is fairly mature**



# PILOT

## Projected Workload

Advanced E6 at Vance not included, but primary to feed E6 is included.

Pilot		FY06	FY07	FY08	FY09	FY10	FY11
Total Primary	Entrants	1,395	1,426	1,590	1,664	1,688	1,699
	Completers	1015 / 1223	1030 / 1242	1001 / 1396	1066 / 1461	1077 / 1482	1093 / 1492
Intermediate E2 / C2	Entrants	52	50	50	50	50	50
	Completers	52	50	50	50	50	50
Intermediate Tiltrotor	Entrants	20	20	42	64	77	107
	Completers	20	20	38	58	69	96
Strike	Entrants	301	286	322	328	342	351
	Completers	216 / 243	247 / 267	248 / 268	252 / 272	255 / 277	267 / 289
Multi-Engine	Entrants	433	441	414	422	422	422
	Completers	153 / 434	158 / 432	150 / 404	158 / 412	158 / 412	158 / 412
Rotary	Entrants	583	611	568	597	591	562
	Completers	443 / 533	455 / 555	447 / 537	475 / 565	469 / 559	461 / 532
E2 / C2	Entrants	52	50	50	50	50	50
	Completers	45	45	45	45	45	45
Tilt Rotor	Entrants	20	20	38	58	69	96
	Completers	18	18	34	52	62	86
Total Advanced*	Entrants	1,387	1,408	1,392	1,455	1,474	1,481
	Completers	875 / 1273	923 / 1317	924 / 1288	982 / 1346	989 / 1355	998 / 1364

- Includes FY05 Carryover
- Blue = USN+USMC
- E2 C2 USN only
- Tiltrotor USMC only



# PRIMARY PILOT

## Projected Workload

Students	FY06	FY07	FY08	FY09	FY10	FY11
Entrants	1,395	1,426	1,590	1,664	1,688	1,699
Completers	1,223	1,242	1,396	1,461	1,482	1,492

	FY06	FY07	FY08	FY09	FY10	FY11
T-34 Flight Hours	142,628	144,493	152,947	147,953	120,967	90,683
T-6 Flight Hours	0	0	3,600	15,280	35,000	65,000
Total	142,628	144,493	156,547	163,233	155,967	155,683

AOB	FY06	FY07	FY08	FY09	FY10	FY11
Projected	711	732	816	853	864	869

Aircraft Required	FY06	FY07	FY08	FY09	FY10	FY11
T-34	250	250	250	213	181	134
T-6	0	0	10	37	69	116



# STRIKE

## Projected Workload

Students	FY06	FY07	FY08	FY09	FY10	FY11
Entrants	301	286	322	328	342	351
Completers	243	267	268	272	277	289

Flight Hours	FY06	FY07	FY08	FY09	FY10	FY11
T-45	71,176	76,236	76,156	77,636	79,036	89,939
T-2	0	0	0	0	0	0
Total	71,176	76,236	76,156	77,636	79,036	82,396

AOB	FY06	FY07	FY08	FY09	FY10	FY11
Projected	294	299	319	325	335	346

Aircraft Required	FY06	FY07	FY08	FY09	FY10	FY11
T-45	138	148	148	151	154	160
T-2C	0	0	0	0	0	0



# MULTI-ENGINE

## Projected Workload

Students	FY06	FY07	FY08	FY09	FY10	FY11
Entrants	433	441	414	422	422	422
Completers	434	432	404	412	412	412

Flight Hours	FY06	FY07	FY08	FY09	FY10	FY11
T-44	30,671	31,310	30,971	31,724	33,495	34,971
TC-12	13,357	12,509	12,271	13,905	12,134	10,658
Total	44,028	43,819	43,242	45,629	45,629	45,629

AOB	FY06	FY07	FY08	FY09	FY10	FY11
Projected	189	190	178	181	181	181

Aircraft Required	FY06	FY07	FY08	FY09	FY10	FY11
T-44	43	43	43	44	46	49
TC-12	20	18	18	20	18	16



# ROTARY

## Projected Workload

<b>Students</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>Entrants</b>	<b>583</b>	<b>611</b>	<b>568</b>	<b>597</b>	<b>591</b>	<b>562</b>
<b>Completers</b>	<b>533</b>	<b>555</b>	<b>537</b>	<b>565</b>	<b>559</b>	<b>532</b>

<b>Flight Hours</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>TH-57</b>	<b>72,208</b>	<b>75,142</b>	<b>73,466</b>	<b>77,682</b>	<b>76,882</b>	<b>73,282</b>

<b>AOB</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>Projected</b>	<b>319</b>	<b>333</b>	<b>315</b>	<b>332</b>	<b>328</b>	<b>312</b>

<b>Aircraft Required</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>TH-57</b>	<b>105</b>	<b>109</b>	<b>107</b>	<b>112</b>	<b>112</b>	<b>107</b>



# E2 / C2

## Projected Workload

<b>Students</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>Entrants INT/ADV</b>	<b>52/52</b>	<b>50/50</b>	<b>50/50</b>	<b>50/50</b>	<b>50/50</b>	<b>50/50</b>
<b>Completers INT/ADV</b>	<b>52/45</b>	<b>50/45</b>	<b>50/45</b>	<b>50/45</b>	<b>50/45</b>	<b>50/45</b>

<b>Flight Hours</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>T-44</b>	<b>2,507</b>	<b>2,507</b>	<b>2,507</b>	<b>2,507</b>	<b>2,507</b>	<b>2,507</b>
<b>T-45</b>	<b>7,543</b>	<b>7,543</b>	<b>7,543</b>	<b>7,543</b>	<b>7,543</b>	<b>7,543</b>
<b>Total</b>	<b>10,050</b>	<b>10,050</b>	<b>10,050</b>	<b>10,050</b>	<b>10,050</b>	<b>10,050</b>

<b>AOB</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>Proj INT E2 / C2</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>
<b>Proj ADV E2 / C2</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>

<b>Aircraft Required</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>T-44</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
<b>T-45</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>





# TILT ROTOR

## Projected Workload

Students	FY06	FY07	FY08	FY09	FY10	FY11
Entrants INT/ADV	20/20	20/20	42/38	64/58	77/69	107/96
Completers INT/ADV	20/20	20/20	38/34	58/52	69/62	96/86

Flight Hours	FY06	FY07	FY08	FY09	FY10	FY11
TH-57	1,086	1,086	1,327	1,931	2,534	3,982
TC-12	1,327	1,327	1,621	2,358	3,095	4,864
Total	2,413	2,413	2,949	4,289	5,630	8,847

AOB	FY06	FY07	FY08	FY09	FY10	FY11
Proj INT Tiltrotor	7	7	14	21	25	35
Proj ADV Tiltrotor	6	6	11	16	19	27

Aircraft Required	FY06	FY07	FY08	FY09	FY10	FY11
TH-57	2	2	2	3	4	6
TC-12	2	2	3	4	5	7



# **PRODUCE REQUIRED OUTPUT**

## **Program Area - Undergraduate Pilot Training**

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- **Overall Assessment**

- Meeting requirement
- Adequate Capacity and Infrastructure
- NAIP / NAPP Performance Models in use

- **Improvement Opportunities**

- Replacing flight time with simulation requires APN expenditures
- CNATRA can train at a lower cost than the FRS, but \$\$ come from different sources (Enterprise savings)

- **5 Percent TOA Reductions - Strategy and Impact**

- OPNAV input required

- **Risk**

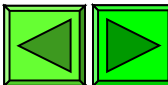
- Medium risk of under manning fleet aviators in out years



# UNDERGRADUATE PILOT TRAINING 27

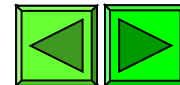
## Manpower

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>553</b>	<b>539</b>	<b>564</b>	<b>564</b>	<b>564</b>	<b>564</b>
<b>Funded</b>	<b>553</b>	<b>539</b>	<b>564</b>	<b>564</b>	<b>564</b>	<b>564</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>491</b>	<b>477</b>	<b>502</b>	<b>509</b>	<b>509</b>	<b>509</b>
<b>Funded</b>	<b>491</b>	<b>477</b>	<b>502</b>	<b>509</b>	<b>509</b>	<b>509</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>
<b>Funded</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>
<b>Funded</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



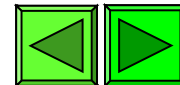
# PRIMARY MANPOWER

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
Required	207	209	213	213	213	213
Funded	207	209	213	213	213	213
Delta	0	0	0	0	0	0
Officer						
Required	200	202	206	206	206	206
Funded	200	202	206	206	206	206
Delta	0	0	0	0	0	0
Enlisted						
Required	0	0	0	0	0	0
Funded	0	0	0	0	0	0
Delta	0	0	0	0	0	0
Civilian						
Required	7	7	7	7	7	7
Funded	7	7	7	7	7	7
Delta	0	0	0	0	0	0



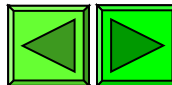
# STRIKE MANPOWER

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
Required	116	127	128	128	128	128
Funded	116	127	128	128	128	128
Delta	0	0	0	0	0	0
Officer						
Required	110	121	122	122	122	122
Funded	110	121	122	122	122	122
Delta	0	0	0	0	0	0
Enlisted						
Required	0	0	0	0	0	0
Funded	0	0	0	0	0	0
Delta	0	0	0	0	0	0
Civilian						
Required	6	6	6	6	6	6
Funded	6	6	6	6	6	6
Delta	0	0	0	0	0	0



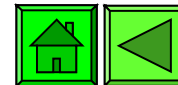
# MULTI-ENGINE MANPOWER

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>
<b>Funded</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>42</b>	<b>42</b>	<b>42</b>	<b>42</b>	<b>42</b>	<b>42</b>
<b>Funded</b>	<b>42</b>	<b>42</b>	<b>42</b>	<b>42</b>	<b>42</b>	<b>42</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Funded</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Funded</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# ROTARY MANPOWER

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>136</b>	<b>148</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>
<b>Funded</b>	<b>136</b>	<b>148</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>104</b>	<b>116</b>	<b>118</b>	<b>118</b>	<b>118</b>	<b>118</b>
<b>Funded</b>	<b>104</b>	<b>116</b>	<b>118</b>	<b>118</b>	<b>118</b>	<b>118</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>
<b>Funded</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Funded</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



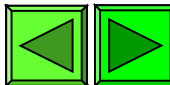
# UNDERGRADUATE PILOT TRAINING

## O&MN Funding

32

	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$264.9M	\$280.5M	\$285.1M	\$311.0M	\$317.9M	\$348.3M
Funded	\$226.1M	\$237.6M	\$238.0M	\$248.5M	\$253.9M	\$264.4M
Delta	<b>\$38.8M</b>	<b>\$42.9M</b>	<b>\$47.1M</b>	<b>\$62.5M</b>	<b>\$64.0M</b>	<b>\$83.9M</b>

- **Potential Initiatives to Reduce Program Costs**
  - **Contract efficiencies**
  - **Legacy Systems reduction**
  - **Increased simulation**
- **FY06-07 Risk Assessment - Medium**
- **Submitted as Priority 1 of 5 Unfunded Issues**



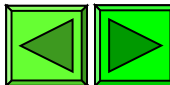


# O&MN FUNDING

## Strike

	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>\$163.3M</b>	<b>\$176.1M</b>	<b>\$179.6M</b>	<b>\$189.3M</b>	<b>\$193.8M</b>	<b>\$207.7M</b>
<b>Funded</b>	<b>\$136.4M</b>	<b>\$146.5M</b>	<b>\$147.1M</b>	<b>\$146.2M</b>	<b>\$149.5M</b>	<b>\$149.7M</b>
<b>Delta</b>	<b>\$26.9M</b>	<b>\$29.6M</b>	<b>\$32.5M</b>	<b>\$43.1M</b>	<b>\$44.3M</b>	<b>\$58.0M</b>

- **Potential Initiatives to Reduce Program Costs**
  - **Contract efficiencies**
  - **Increased simulation**
- **FY06-07 Risk Assessment - Medium**
- **Submitted as Priority 1 of 5 Unfunded Issues**

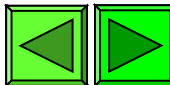


# O&MN FUNDING

## Multi-Engine

	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>\$22.6M</b>	<b>\$23.0M</b>	<b>\$23.1M</b>	<b>\$23.7M</b>	<b>\$27.3M</b>	<b>\$30.1M</b>
<b>Funded</b>	<b>\$20.4M</b>	<b>\$20.6M</b>	<b>\$20.4M</b>	<b>\$20.1M</b>	<b>\$23.7M</b>	<b>\$25.3M</b>
<b>Delta</b>	<b>\$2.2M</b>	<b>\$2.4M</b>	<b>\$2.7M</b>	<b>\$3.6M</b>	<b>\$3.6M</b>	<b>\$4.8M</b>

- **Potential Initiatives to Reduce Program Costs**
  - **Contract efficiencies**
  - **Increased simulation**
- **FY06-07 Risk Assessment - Medium**
- **Submitted as Priority 1 of 5 Unfunded Issues**

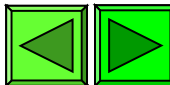


# O&MN FUNDING

## Rotary

	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>\$54.8M</b>	<b>\$57.3M</b>	<b>\$57.3M</b>	<b>\$66.0M</b>	<b>\$66.9M</b>	<b>\$74.8M</b>
<b>Funded</b>	<b>\$48.4M</b>	<b>\$50.2M</b>	<b>\$49.5M</b>	<b>\$55.6M</b>	<b>\$56.3M</b>	<b>\$60.9M</b>
<b>Delta</b>	<b>\$6.4M</b>	<b>\$7.1M</b>	<b>\$7.8M</b>	<b>\$10.4M</b>	<b>\$10.6M</b>	<b>\$13.9M</b>

- **Potential Initiatives to Reduce Program Costs**
  - **Contract efficiencies**
  - **Increased simulation**
- **FY06-07 Risk Assessment - Medium**
- **Submitted as Priority 1 of 5 Unfunded Issues**

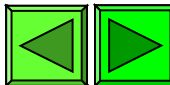


# O&MN FUNDING

## E2 / C2

	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	\$21.6M	\$21.5M	\$21.8M	\$25.8M	\$22.9M	\$23.7M
<b>Funded</b>	\$18.3M	\$17.9M	\$17.8M	\$20.5M	\$17.5M	\$16.6M
<b>Delta</b>	<b>\$3.3M</b>	<b>\$3.6M</b>	<b>\$4.0M</b>	<b>\$5.3M</b>	<b>\$5.4M</b>	<b>\$7.1M</b>

- **Potential Initiatives to Reduce Program Costs**
  - **Contract efficiencies**
  - **Increased simulation**
- **FY06-07 Risk Assessment - Medium**
- **Submitted as Priority 1 of 5 Unfunded Issues**

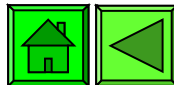


# O&MN FUNDING

## Tilt Rotor

	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>\$2.6M</b>	<b>\$2.6M</b>	<b>\$3.3M</b>	<b>\$6.2M</b>	<b>\$7.0M</b>	<b>\$12.0M</b>
<b>Funded</b>	<b>\$2.6M</b>	<b>\$2.6M</b>	<b>\$2.6M</b>	<b>\$6.2M</b>	<b>\$7.0M</b>	<b>\$12.0M</b>
<b>Delta</b>	<b>\$0.0M</b>	<b>\$0.0M</b>	<b>\$0.0M</b>	<b>\$0.0M</b>	<b>\$0.0M</b>	<b>\$0.0M</b>

- **Potential Initiatives to Reduce Program Costs**
  - **Unknown**
- **FY06-07 Risk Assessment - Medium**
- **Submitted as Priority 1 of 5 Unfunded Issues**



# **MEASURING OUTPUT QUALITY**

## **Program Area - Undergraduate Pilot Training**

38

- **Overall Assessment**
  - **Product Quality Determined through FRS feedback / attrition**
  - **Product Quality Meets Fleet Requirement**
  - **HPSM to be applied in FY 05 curriculum conferences**
- **Improvement Opportunities**
  - **Tied to OM&N / APN costs**
- **Risk**
  - **Risks of Not Effectively Measuring Product Quality**
    - **Increased FRS / enterprise costs**
    - **Medium risk - FRS costs for flight training are 4 X's greater than CNATRA's**



# UNDERGRADUATE NFO TRAINING

## Analysis Results

- Validate **Mission Requirement**
- Define **Competencies**
- Demand Basis for **Input Plan**
- Develop **Production Capability**
- Measure Output **Quality**




# VALIDATE MISSION REQUIREMENT 40

## Program Area - Undergraduate NFO Training

**Requirement:  
2004**

**(a) CNO ltr 3500 SER N789F1/ Ser N789F1/3U635817 of 12 Apr**

**(b) OPNAVINST 3500.**

	<b>DEPARTMENT OF THE NAVY</b> OFFICE OF THE CHIEF OF NAVAL OPERATIONS 2000 NAVY PENTAGON WASHINGTON, D.C. 20350-2000
IN REPLY REFER TO	
3500 Ser N782B5/4U790427 12 Apr 2004	
From: Chief of Naval Operations (N782B)	
Subj: FY-05 THROUGH FY-12 FLEET AVIATOR, CNATRA AND FLEET READINESS SQUADRONS (FRS) TRAINING REQUIREMENTS.	
Ref: (a) CNO ltr 3500 SER N789F1/ Ser N789F1/3U635817 of 24 Apr 2003 (b) OPNAVINST 3500.31G	
Encl: 1 through 20	
(1) FLEET Requirement (2) PTR (3) NFOTR (4) F-14A/B/D (5) F/A-18C/D (6) F/A-18E/F (7) EA-6B/EA-18G (8) S-3 (9) E-2/C-2 (10) P-3C	(11) HH-60H (12) MH-60R (13) MH-60S (14) SH-60B (15) SH-60F (16) UH-3H (17) MH-53E (18) E6B (19) USMC FRS Requirements (20) F-35
<ol style="list-style-type: none"><li>1. Cancellation. This document supercedes reference (a).</li><li>2. Enclosures (1-20) are the FY-05 through FY-12 Fleet Aviator requirement broken down by CNATRA training output and Type/Model FRS Training Output. These requirements are the result of extensive coordination between CNO (N782B) formerly N789, BUPERS, CNO N780 and HQMC. FRS categories are standardized IAW reference (b).</li><li>3. This document serves three primary purposes:<ol style="list-style-type: none"><li>a) As a long term budget planning document to ensure effective budget planning and resource allocation during the development of resource sponsors Program Objective Memorandums (POM) or Program Reviews (PR).</li></ol></li></ol>	





# **DEFINE SKILLS OR COMPETENCIES** 41

## **Program Area - Undergraduate NFO Training**

- **Overall Assessment**
  - **Skill sets determined by FRS input training requirements**
    - **Close coordination w/ FRS maximizes Effectiveness**
  - **HPSM to be utilized in FY 05 Curriculum conferences**
- **Improvement Opportunities**
  - **Down load or upload of training is difficult when CNATRA/FRS funding is limited and from different sponsors**
  - **Redesign of NFO curriculum in work to reflect reduction in fleet T/M/S**
  - **NFO Curriculum redesign may save OM&N dollars**
- **Risk**
  - **Not executing cost effective training**



# INPUT PLAN

## Program Area - Undergraduate NFO Training

- **Overall Assessment**

- **Discuss Methodology Used to Project Inputs**

- *OPNAV N782 initiates the process by defining the training requirements. OPNAV N782 uses various manpower models (e.g., NAIP Model, CSR Model) and coordination with BUPERS, and CMC to determine annual requirements for each type of pilot, NFO, and NAC required to fill fleet demands. The multi-year training requirement reflects current and proposed fleet force structure, CNO/CMC manning policies, and squadron crew experience mix requirements.*

- **Projected Workload**

- **Improvement Opportunities**

- **NAIP / NAPP models are fairly mature**
  - **Accessions need fine tuning**

- **Risks of Inaccurate Input Projections**

- **Excess capacity, under utilization of resources**
  - **Low risk as NAIP model is fairly mature**



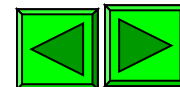
# NFO

## Projected Workload

NFO		FY06	FY07	FY08	FY09	FY10	FY11
Total Primary	Entrants	513	459	525	516	516	517
	Completers	301 / 474	311 / 416	319 / 469	310 / 461	310 / 461	311 / 462
Intermediate	Entrants	349	286	331	323	323	324
	Completers	167 / 324	175 / 289	171 / 312	162 / 305	162 / 305	163 / 306
Core	Entrants	283	245	265	258	258	259
	Completers	124 / 276	128 / 246	121 / 258	112 / 251	112 / 251	113 / 252
Strike	Entrants	102	113	84	76	76	77
	Completers	58 / 105	57 / 102	53 / 81	45 / 73	45 / 73	46 / 74
Strike / Fighter	Entrants	174	175	174	175	175	175
	Completers	63 / 173	62 / 169	63 / 169	63 / 170	63 / 170	63 / 170
ATDS	Entrants	42	44	49	49	49	49
	Completers	40	44	47	47	47	47
NAV	Entrants	123	123	138	138	138	138
	Completers	121	121	135	135	135	135
Total Advanced	Entrants	441	455	445	438	438	439
	Completers	282 / 439	284 / 436	298 / 432	290 / 425	290 / 425	291 / 426

Includes FY05 Carryover

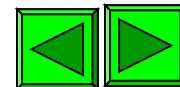
• Blue = USN+USMC



# NFO

## Projected Workload

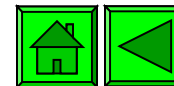
AOB	FY06	FY07	FY08	FY09	FY10	FY11
NFO (Strike)	27	28	22	20	20	20
NFO (Strike / FTR)	80	79	79	80	80	80
NFO Airborne Tactical Data System (ATDS)	See Note 1					
NFO Navigator	See Note 2					
NFO (Core)	51	45	47	46	46	46
NFO (Intermediate)	101	87	97	95	95	95
NFO (Primary)	157	157	157	157	157	157
Note 1: ATDS Workload is Done at VAW-120 (Norfolk) Note 2: NAV Workload Is Done at Randolph AFB						



# NFO

## Projected Workload

Flight Hours	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
T-34	19,088	4,983	6,369	6,239	0	0	0	0
T-6	16,570	29,648	29,522	29,483	35,700	35,700	35,700	35,700
T-2	3,806	3,495	3,200	3,617	3,565	3,565	3,565	3,565
T-39 / T-48	11,643	11,137	10,912	11,380	11,257	11,257	11,257	11,257
Aircraft Required	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
T-34	29	8	10	10	0	0	0	0
T-6	23	42	41	41	50	50	50	50
T-2	9	9	9	9	9	9	9	9
T-1	8	7	7	7	7	7	7	7
T-39/T-48	13	12	12	12	12	12	12	12



# **PRODUCE REQUIRED OUTPUT**

## **Program Area - Undergraduate NFO Training**

46

- **Overall Assessment**

- Meeting requirement
- Adequate Capacity and Infrastructure
- T-39 training needs replacement due to cost / FLE
- NAIP / NAPP Performance Models in use

- **Improvement Opportunities**

- Replacing flight time with simulation requires APN expenditures
- CNATRA can train at a lower cost than the FRS, but \$\$ come from different sources (Enterprise savings)

- **5 Percent TOA Reductions - Strategy and Impact**

- OPNAV input required

- **Risk**

- Medium risk of under manning fleet aviators in out years



# UNDERGRADUATE NFO TRAINING

## Manpower

47

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>140</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>
<b>Funded</b>	<b>140</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>129</b>	<b>135</b>	<b>135</b>	<b>135</b>	<b>135</b>	<b>135</b>
<b>Funded</b>	<b>129</b>	<b>135</b>	<b>135</b>	<b>135</b>	<b>135</b>	<b>135</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Funded</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>Funded</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# UNDERGRADUATE NFO TRAINING

## O&MN Funding

48

	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$31.1M	\$30.0M	\$31.8M	\$30.2M	\$32.5M	\$33.4M
Funded	\$26.8M	\$25.2M	\$26.6M	\$23.3M	\$25.3M	\$24.0M
Delta	\$4.3M	\$4.8M	\$5.2M	\$6.9M	\$7.2M	\$9.4M

- **Potential Initiatives to Reduce Program Costs**
  - **Contract efficiencies**
  - **Legacy Systems reduction**
  - **Increased simulation**
- **FY06-07 Risk Assessment - Medium**
- **Submitted as Priority 1 of 5 Unfunded Issues (if Submitted)**





# **MEASURING OUTPUT QUALITY**

## **Program Area - Undergraduate NFO Training**

49

- **Overall Assessment**
  - **Product Quality determined through FRS feedback / attrition**
  - **Product Quality meets Fleet Requirement**
  - **HPSM to be applied in FY 05 curriculum conferences**
- **Improvement Opportunities**
  - **Tied to OM&N / APN costs**
- **Risk**
  - **Risks of Not Effectively Measuring Product Quality**
    - **Increased FRS / enterprise costs**
    - **Medium risk - FRS costs for flight training are 4 X's greater than CNATRA's**



# AIRCREW / AIR RESCUE TRAINING

## Analysis Results

- Validate **Mission Requirement**
- Define **Competencies** and Skill Sets
- Demand Basis for **Input Plan**
- Develop **Production** Capability
- Measure Output **Quality**




# VALIDATE MISSION REQUIREMENT 51

## Program Area - Aircrew / Air Rescue Training

**Requirement:  
2004**

**(a) CNO ltr 3500 SER N789F1/ Ser N789F1/3U635817 of 12 Apr**

**(b) OPNAVINST 3500.**

	<b>DEPARTMENT OF THE NAVY</b> OFFICE OF THE CHIEF OF NAVAL OPERATIONS 2000 NAVY PENTAGON WASHINGTON, D.C. 20350-2000
IN REPLY REFER TO	
3500 Ser N782B5/4U790427 12 Apr 2004	
From: Chief of Naval Operations (N782B)	
Subj: FY-05 THROUGH FY-12 FLEET AVIATOR, CNATRA AND FLEET READINESS SQUADRONS (FRS) TRAINING REQUIREMENTS.	
Ref: (a) CNO ltr 3500 SER N789F1/ Ser N789F1/3U635817 of 24 Apr 2003 (b) OPNAVINST 3500.31G	
Encl: 1 through 20	
(1) FLEET Requirement (2) PTR (3) NFOTR (4) F-14A/B/D (5) F/A-18C/D (6) F/A-18E/F (7) EA-6B/EA-18G (8) S-3 (9) E-2/C-2 (10) P-3C	(11) HH-60H (12) MH-60R (13) MH-60S (14) SH-60B (15) SH-60F (16) UH-3H (17) MH-53E (18) E6B (19) USMC FRS Requirements (20) F-35
<ol style="list-style-type: none"><li>1. Cancellation. This document supercedes reference (a).</li><li>2. Enclosures (1-20) are the FY-05 through FY-12 Fleet Aviator requirement broken down by CNATRA training output and Type/Model FRS Training Output. These requirements are the result of extensive coordination between CNO (N782B) formerly N789, BUPERS, CNO N780 and HQMC. FRS categories are standardized IAW reference (b).</li><li>3. This document serves three primary purposes:<ol style="list-style-type: none"><li>a) As a long term budget planning document to ensure effective budget planning and resource allocation during the development of resource sponsors Program Objective Memorandums (POM) or Program Reviews (PR).</li></ol></li></ol>	



# **DEFINE SKILLS OR COMPETENCIES** 52

## **Program Area - Aircrew / Air Rescue Training**

- **Overall Assessment**
  - Skill sets determined by FRS input training requirements
    - Close coordination w/ FRS maximizes Effectiveness
  - HPSM to be utilized in FY 05 Curriculum conferences
- **Improvement Opportunities**
  - Down load or upload of training is difficult when CNATRA/FRS funding is limited and from different sponsors
- **Risk**
  - Not executing cost effective training



## Program Area - Aircrew / Air Rescue Training

- **Overall Assessment**
  - **Discuss Methodology Used to Project Inputs**
    - *OPNAV N782 initiates the process by defining the training requirements. OPNAV N782 uses various manpower models (e.g., NAIP Model, CSR Model) and coordination with BUPERS, and CMC to determine annual requirements for each type of pilot, NFO, and NAC required to fill fleet demands. The multi-year training requirement reflects current and proposed fleet force structure, CNO/CMC manning policies, and squadron crew experience mix requirements.*
  - **Projected Workload**
- **Improvement Opportunities**
  - **NAIP model under development**
  - **NAPP modeling in use**
- **Risk**
  - **Risks of Inaccurate Input Projections**
    - **Excess capacity, under utilization of resources**



# AIRCREW / AIR RESCUE

## Projected Workload

54

	Output Metric	FY06	FY07	FY08	FY09	FY10	FY11
<b>NAC AIRR</b> (Wet Aircrew)	<b>Entrants</b>	<b>448</b>	<b>420</b>	<b>451</b>	<b>382</b>	<b>356</b>	<b>321</b>
	<b>Graduates</b>	<b>190</b>	<b>184</b>	<b>183</b>	<b>155</b>	<b>145</b>	<b>130</b>
	<b>AOB</b>	<b>265</b>	<b>257</b>	<b>256</b>	<b>217</b>	<b>203</b>	<b>182</b>
<b>NAC AIRC</b> (Dry Aircrew)	<b>Entrants</b>	<b>592</b>	<b>537</b>	<b>536</b>	<b>520</b>	<b>499</b>	<b>499</b>
	<b>Graduates</b>	<b>333</b>	<b>340</b>	<b>298</b>	<b>289</b>	<b>277</b>	<b>277</b>
	<b>AOB</b>	<b>494</b>	<b>503</b>	<b>441</b>	<b>428</b>	<b>410</b>	<b>410</b>
<b>USMC</b>	<b>Entrants</b>	<b>298</b>	<b>250</b>	<b>215</b>	<b>211</b>	<b>196</b>	<b>185</b>
	<b>Graduates</b>	<b>165</b>	<b>164</b>	<b>159</b>	<b>156</b>	<b>145</b>	<b>137</b>
	<b>AOB</b>	<b>214</b>	<b>213</b>	<b>207</b>	<b>203</b>	<b>189</b>	<b>178</b>



# **PRODUCE REQUIRED OUTPUT**

55

## **Program Area - Aircrew / Air Rescue Training**

- **Overall Assessment**

- Meeting requirement
- Adequate Capacity and Infrastructure ( w/ Ivan Workarounds ....)
- NAIP / NAPP Performance Models in work

- **Improvement Opportunities**

- Substandard infrastructure / Hurricane
- Star 21

- **5 Percent TOA Reductions – Strategy and Impact**

- Requires OPNAV input

- **Risk**

- Medium risk of under manning fleet aircrew in out years



# AIRCREW / AIR RESCUE TRAINING

## Manpower

56

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>
<b>Funded</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Funded</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>
<b>Funded</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Funded</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>





# AIRCREW / AIR RESCUE TRAINING

## O&MN Funding

O&MN (3B2K)	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$.8M	\$.8M	\$.8M	\$.9M	\$.9M	\$.9M
Funded	\$.8M	\$.8M	\$.8M	\$.9M	\$.9M	\$.9M
Delta	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M

- **Potential Initiatives to Reduce Program Costs**
  - **Star 21**
- **FY06-07 Risk Assessment - Medium**
- **Submitted as Priority 1 of 5 Unfunded Issues**



# **MEASURING OUTPUT QUALITY**

## **Program Area - Aircrew / Air Rescue Training**

58

- **Overall Assessment**
  - **Product Quality Determined through FRS feedback / attrition**
  - **Product Quality Meets Fleet Requirement**
  - **HPSM to be applied in FY 05 curriculum conferences**
- **Improvement Opportunities**
  - **Tied to OM&N / APN costs**
  - **Star 21**
- **Risk**
  - **Risks of Not Effectively Measuring Product Quality**
    - **Increased FRS / enterprise costs**
    - **Medium risk - FRS costs for flight training are 4 X's greater than CNATRA's**



# UAV TRAINING

## Analysis Results

- **Validate Mission Requirement**
- **Define Competencies and Skill Sets**
- **Demand Basis for Input Plan**
- **Develop Production Capability**
- **Measure Output Quality**



# **VALIDATE MISSION REQUIREMENT**

## **Program Area - UAV Training**

- **Air Lant collects fleet requirements from VMU 1/2, VC-6**
  - **Requirements processed at annual “C” school planning conference for enlisted personnel, then passed to BUPERS / MATSG / CNATRA UAV DET**
  - **Requirements passed to BUPERS / MATSG/ CNATRA UAV DET for Officers**
- **Strategy**
  - **USN UAV Strategic Planning Document still in work**



# **DEFINE SKILLS OR COMPETENCIES**

## **Program Area - UAV Training**

- **Overall Assessment**
  - **Skill Sets Determined through VC-6 / VMU-1 / 2 discussion**
    - **CNATRA Det and Fleet units operate same platform**
  - **HPSM not applied to date**
- **Improvement Opportunities**
  - **Vague Fleet Requirement**
  - **NATOPS Model Manager is deployed unit**
  - **Implement Curriculum Planning Conferences**



# **INPUT PLAN**

## **Program Area - UAV Training**

- **Overall Assessment**
  - **Currently meeting Fleet Requirements**
  - **Current plan does not account for Fire Scout training requirements and squadrons to be manned beginning FY08**
  - **Projected Workload**
- **Improvement Opportunities**
  - **NAIP / NAPP modeling currently not used**
- **Risk**
  - **No outyear planning from “Big Navy” identifying future training requirements**



# UAV TRAINING

## Projected Workload

63

Platform	Output Metric	FY06	FY07	FY08	FY09	FY10	FY11
Pioneer C-104-0641 EXT PLT	Requirement	12	12	12	12	12	12
	Planned Input	12	12	12	12	12	12
	AOB	4	4	4	4	4	4
Pioneer C-104-0642 INT OPER	Requirement	21	21	21	21	21	21
	Planned Input	21	21	21	21	21	21
	AOB	6	6	6	6	6	6
Pioneer C-2E-0640 Mission CDR	Requirement	15	15	15	15	15	15
	Planned Input	15	15	15	15	15	15
	AOB	4	4	4	4	4	4



# **PRODUCE REQUIRED OUTPUT**

## **Program Area - UAV Training**

- **Overall Assessment**

- Meeting requirement
- Inadequate Capacity and Infrastructure - CoW, old training platforms
- NAIP / NAPP Performance Models not in use

- **Improvement Opportunities**

- Replacing flight time with simulation requires APN expenditures
  - Will decrease time to train, increase student capacity

- **5 Percent TOA Reductions - Strategy and Impact**

- Unknown

- **Risk**

- High risk of under manning fleet in out years





# UAV TRAINING

## Manpower

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
<b>Funded</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Funded</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
<b>Funded</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Funded</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# UAV TRAINING

## O&MN Funding

O&MN (3B2K)	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$1.6M	\$1.6M	\$1.6M	\$1.7M	\$1.7M	\$1.7M
Funded	\$1.6M	\$1.6M	\$1.6M	\$1.7M	\$1.7M	\$1.7M
Delta	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M

- **Potential Initiatives to Reduce Program Costs**
  - **Simulation reduces airspace costs and time to train**
  - **New control stations and air vehicles to reduce cost of re-engineering for parts/support**
- **FY06-07 Risk Assessment - Medium**



# **MEASURING OUTPUT QUALITY**

## **Program Area - UAV Training**

- **Overall Assessment**
  - **Product Quality determined through VC/VMU feedback**
  - **Product Quality meets Fleet Requirement**
  - **HPSM opportunities exist**
- **Improvement Opportunities**
  - **Curriculum planning conference**
  - **More reliable equipment / simulation opportunities require OM&N / APN costs**
- **Risk**
  - **Risks of Not Effectively Measuring Product Quality**
    - **High - No program currently in place**



# MANPOWER

## Undergraduate Pilot Training

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>553</b>	<b>539</b>	<b>564</b>	<b>564</b>	<b>564</b>	<b>564</b>
<b>Funded</b>	<b>553</b>	<b>539</b>	<b>564</b>	<b>564</b>	<b>564</b>	<b>564</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>491</b>	<b>477</b>	<b>502</b>	<b>509</b>	<b>509</b>	<b>509</b>
<b>Funded</b>	<b>491</b>	<b>477</b>	<b>502</b>	<b>509</b>	<b>509</b>	<b>509</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>
<b>Funded</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>
<b>Funded</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# MANPOWER

## Undergraduate NFO Training

<b>End Strength</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
<b>Required</b>	<b>140</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>
<b>Funded</b>	<b>140</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>129</b>	<b>135</b>	<b>135</b>	<b>135</b>	<b>135</b>	<b>135</b>
<b>Funded</b>	<b>129</b>	<b>135</b>	<b>135</b>	<b>135</b>	<b>135</b>	<b>135</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Funded</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>Funded</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# MANPOWER

## Aircrew / Air Rescue Training

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>
<b>Funded</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Funded</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>
<b>Funded</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>44</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Funded</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# MANPOWER

## UAV Training

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
<b>Funded</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Funded</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
<b>Funded</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Funded</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# MANPOWER

## Schools Command

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>179</b>	<b>179</b>	<b>179</b>	<b>179</b>	<b>179</b>	<b>179</b>
<b>Funded</b>	<b>179</b>	<b>179</b>	<b>179</b>	<b>179</b>	<b>179</b>	<b>179</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>39</b>
<b>Funded</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>39</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>108</b>	<b>108</b>	<b>108</b>	<b>108</b>	<b>108</b>	<b>108</b>
<b>Funded</b>	<b>108</b>	<b>108</b>	<b>108</b>	<b>108</b>	<b>108</b>	<b>108</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>32</b>
<b>Funded</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>32</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>





# MANPOWER

## Pensacola SAR

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>
<b>Funded</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>Funded</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>
<b>Funded</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Funded</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# 74

# FLIGHT SUPPORT MANPOWER

## (Trawings, Contract Administration Units, AETC)

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>308</b>	<b>308</b>	<b>308</b>	<b>308</b>	<b>308</b>	<b>308</b>
<b>Funded</b>	<b>308</b>	<b>308</b>	<b>308</b>	<b>308</b>	<b>308</b>	<b>308</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>
<b>Funded</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>46</b>	<b>46</b>	<b>46</b>	<b>46</b>	<b>46</b>	<b>46</b>
<b>Funded</b>	<b>46</b>	<b>46</b>	<b>46</b>	<b>46</b>	<b>46</b>	<b>46</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>
<b>Funded</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# MANPOWER

## CNATRA Staff

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>105</b>	<b>105</b>	<b>105</b>	<b>105</b>	<b>105</b>	<b>105</b>
<b>Funded</b>	<b>105</b>	<b>105</b>	<b>105</b>	<b>105</b>	<b>105</b>	<b>105</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>
<b>Funded</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
<b>Funded</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>
<b>Funded</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# MANPOWER

## Blue Angels

End Strength	FY06	FY07	FY08	FY09	FY10	FY11
<b>Required</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>
<b>Funded</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Officer</b>						
<b>Required</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>Funded</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Enlisted</b>						
<b>Required</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>
<b>Funded</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Civilian</b>						
<b>Required</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Funded</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Delta</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# O&MN FUNDING Pilot

O&MN (3B2K)	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$264.9M	\$280.5M	\$285.1M	\$311.0M	\$317.9M	\$348.3M
Funded	\$226.1M	\$237.6M	\$238.0M	\$248.5M	\$253.9M	\$264.4M
Delta	<b>\$38.8M</b>	<b>\$42.9M</b>	<b>\$47.1M</b>	<b>\$62.5M</b>	<b>\$64.0M</b>	<b>\$83.9M</b>

- **Major Cost Drivers**
  - **Flight hours**
  - **Contracts**
- **Shortfall Caused by under funded program passed to NOOT**
- **Submitted as Priority 1 of 5 Unfunded Issues**



# O&MN FUNDING NFO

O&MN (3B2K)	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$31.1M	\$30.0M	\$31.8M	\$30.2M	\$32.5M	\$33.4M
Funded	\$26.8M	\$25.2M	\$26.6M	\$23.3M	\$25.3M	\$24.0M
Delta	<b>\$4.3M</b>	<b>\$4.8M</b>	<b>\$5.2M</b>	<b>\$6.9M</b>	<b>\$7.2M</b>	<b>\$9.4M</b>

- **Major Cost Drivers**
  - **Flight Hours**
  - **Contracts**
- **Shortfall Caused by under funded program passed to NOOT**
- **Submitted as Priority 1 of 5 Unfunded Issues**



# O&MN FUNDING

## Aircrew / Air Rescue

O&MN (3B2K)	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$.8M	\$.8M	\$.8M	\$.8M	\$.8M	\$.8M
Funded	\$.8M	\$.8M	\$.8M	\$.8M	\$.8M	\$.8M
Delta	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M

- **Major Cost Drivers**
  - **Contracted swim instructor support**



# O&MN FUNDING SAR

O&MN (3B2K)	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$2.6M	\$2.7M	\$2.7M	\$2.7M	\$2.8M	\$2.9M
Funded	\$2.6M	\$2.7M	\$2.7M	\$2.7M	\$2.8M	\$2.9M
Delta	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M

- **Major Cost Drivers**
  - **Rescue swimmer school requirements**
  - **Flight hours and support contract**





# O&MN FUNDING

## Schools Command

O&MN (3B2K)	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$2.6M	\$2.6M	\$2.7M	\$2.7M	\$2.7M	\$2.8M
Funded	\$2.6M	\$2.6M	\$2.7M	\$2.7M	\$2.7M	\$2.8M
Delta	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M

- **Major Cost Drivers - civilian labor, supplies**



# O&MN FUNDING

## Flight Support

O&MN (3B2K)	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$107.5M	\$109.0M	\$108.9M	\$111.5M	\$114.4M	\$116.4M
Funded	\$91.9M	\$93.4M	\$93.4M	\$95.7M	\$97.3M	\$98.2M
Delta	<b>\$15.6M</b>	<b>\$15.6M</b>	<b>\$15.5M</b>	<b>\$15.8M</b>	<b>\$17.1M</b>	<b>\$18.2M</b>

- **Major Cost Drivers - CSI (20.5M), AIMD (13.1M), IM (9.9M), NAPP (6.7M), IFS (5.8M), Admin Contract (6.9M)**
- **Shortfall Caused by under funded program passed to NOOT Submitted as Priority 1 of 5 Unfunded Issues**



# OTHER O&MN FUNDING

## Executed by CNATRA

By Appropriation	FY06	FY07	FY08	FY09	FY10	FY11
O&MN (3B1K)	UAV Training and Aviation Ordnance Officer Course					
		Moved to 3B2K Account				
O&MN (3C1L)	Blue Angels					
Required	\$20.6M	\$20.9M	\$21.3M	\$21.7M	\$22.1M	\$22.8M
Funded	\$20.0M	\$20.3M	\$20.6M	\$20.9M	\$21.5M	\$22.0M
Delta	\$.6M	\$.6M	\$.7M	\$.8M	\$.6M	\$.8M
O&MN (3B4K)	CNATRA Staff					
Required	\$4.6M	\$4.7M	\$4.8M	\$4.9M	\$5.1M	\$5.2M
Funded	\$4.6M	\$4.7M	\$4.8M	\$4.9M	\$5.1M	\$5.2M
Delta	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M

- Major Cost Drivers -flight hours for Blue Angels, civilian labor, travel
- Blue's shortfall caused by increase in DOD fuel rates
- Submitted as Priority 3 of 5 Unfunded Issues



# ISSUE 1: 3B2K Shortfall

By Appropriation	FY06	FY07	FY08	FY09	FY10	FY11
O&MN (3B2K)						
Required	\$416.9M	\$432.4M	\$442.8M	\$467.0M	\$480.3M	\$514.0M
Funded	\$351.1M	\$361.9M	\$364.1M	\$374.4M	\$384.4M	\$394.8M
Delta	<b>\$65.9M</b>	<b>\$70.5M</b>	<b>\$78.7M</b>	<b>\$92.6M</b>	<b>\$95.9M</b>	<b>\$119.2M</b>

- **Capability at Current Funding**
  - Can produce 668 of required 875 Navy/Marine pilots (76%)
  - Can produce 178 of require 282 Navy/Marine NFO's (63%)
- **Alternatives at Current Funding Levels**
  - Cancel IFS program adding risk to increased attrition
  - No flight surgeon or TPS training provided
  - Reduced NAPP support adding risk to pipeline management
  - No detachment training except CQ's



# ISSUE 2: CNATRA OAG Priorities

- 1) T-45 Avionics Modernization **Funded**
- 2) JPATS Procurement **Funded**
- 3) T-45 Procurement (217 + 6) **Funded**
- 4) TH-57 Cockpit Obsolescence Upgrade (roll up) **Unfunded**
- 5) T-44 / TC-12 Avionics Upgrade / Common Cockpit / Sim Acquisition **Unfunded**
- 6) T-44 Obsolescence issues: Stall / Wiring / Pressurization **Unfunded**
- 7) T-44 Sim Visuals **Unfunded**
- 8) T-6 / T-34 NACWS Replacement **Unfunded**
- 9) NFO Training System Procurement (POM 08) **Unfunded**
- 10) T-45 high alt flame out / stall **Unfunded**

- **Description**
- **Capability at Current Funding**
- **Impact / Risk to Whom**



# ISSUE 3: 3C1L Shortfall

By Appropriation	FY06	FY07	FY08	FY09	FY10	FY11
O&MN (3C1L)						
Required	\$20.6M	\$20.9M	\$21.3M	\$21.7M	\$22.1M	\$22.8M
Funded	\$20.0M	\$20.3M	\$20.6M	\$20.9M	\$21.5M	\$22.0M
Delta	<b>\$.6M</b>	<b>\$.6M</b>	<b>\$.7M</b>	<b>\$.8M</b>	<b>\$.6M</b>	<b>\$.8M</b>

- **Capability at Current Funding**
  - **LOE program - should be able to execute planned schedule**
  - **Medium risk of schedule impact due to higher than planned AVDLR costs**
- **Shortfall reduced over \$1M from POM06 submission.**



# ISSUE 4: T45 Engine Stall

By Appropriation	FY06	FY07	FY08	FY09	FY10	FY11
O&MN (3B2K)						
Required	NA	NA	NA	\$5.1M	\$5.2M	\$5.4M
Funded				\$0.0M	\$0.0M	\$0.0M
Delta				\$5.1M	\$5.1M	\$5.1M

- **OMN funding required to fix T45 engine surge problem.**
- **NAVAIR proposal to fund fix by increasing hourly cost of T45 power by the hour contract.**
- **Improves safety performance of the aircraft.**



# ISSUE 5: IT Refresh

By Appropriation	FY06	FY07	FY08	FY09	FY10	FY11
OPN						
Required	\$.8M	\$.8M	\$.9M	\$.9M	NA	NA
Funded	0.0	0.0	0.0	0.0		
Delta	\$.8M	\$.8M	\$.9M	\$.9M		

- Procurement funds required to purchase multiple end items of equipment for refreshment of the Training Information Management System (TIMS) prior to NMCI control.
- Networked system requires procurement funds to purchase multiple components exceeding \$250K.
- Lack of funding will require continuation of aging workstations and servers with increased potential for failure resulting in impact to training management.





## **Highlights of OPNAV N782 CNATRA PR 07 APN Brief**

# N782 Priority List

## A, B, C

Platform	PMA Trkr #	Technical Solution
	<b>Priority A</b>	
TH57	PMA273T57FY05-001	TH-57 Cockpit Modernization
		- TH-57 Exceedence Warning System
		- TH-57 Energy Attenuating Seats
		- TH-57 Digital Cockpit
		- TH-57C Night Vision Cockpit
T-44	PMA273T44FY05-001	T-44A Obsolescence Issues
TC-12	PMA273T12FY05-001	TC-12B Cockpit Upgrade
T-44	PMA273T44FY05-002	T-44 Simulator Visual Systems Upgrade
T-45	PMA273T45FY05-001	T-45 F405 Engine Surge/Flameout
	<b>Priority B</b>	
T-34	PMA273T34FY05-001	T-34C NACWS Replacement
T-6	PMA273T06FY05-001	T-6A NACWS Replacement
	<b>Priority C</b>	
T-6	PMA273T06FY05-002	T-6A Oil Pressure Caution
T-6	PMA273T06FY05-003	T-6A Braking Improvement
T-6	PMA273T06FY05-004	T-6A Maritime Conversion

# T-45 TS Program Health Assessment

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- **Description:** (ACAT 1C) The T45TS is the Navy's undergraduate jet flight training system. It replaces the T-2 / TA-4 and provides fully integrated training for Strike, E2, and C2 pilots. Program inventory requirements include 223 carrier capable T-45 aircraft, 17 simulators, the Training Integration System, and academic instruction devices. Aircraft planned service life is thru 2035. Contractor Logistics Support is used for all levels of maintenance.
- **Pending Decisions/Milestones:** None. Currently in 'Full Rate' production.
- **Requirements Issues:** None
- **Basis of current budget cost:** AIR 4.2 Production Cost Model (FPRA dtd 15 June 2004).
- **Status Summary:** Overall the T-45 program is Green. Present funding (OSD06) through the FYDP supports the 223 aircraft requirement. Due to late (Jul 2004) DON 06 formulation validation of the 223 aircraft req and subsequent last lot buy determination of FY07, FY08 is currently not sufficiently funded to support 'Build to Complete' Sustaining Engineering and Last Lot Disruption costs. This issue will be addressed in POM-08. Additionally, 8 yellow NCDP issues associated with Correction of Deficiencies OSIP (08-95), Engine Surge (OSIP 03-03), Required Avionic Modernization Program (OSIP 17-04), and Synthetic Radar (OSIP 02-06) exist. The Correction of Deficiencies OSIP is insufficiently funded to support required modifications and installations in FY08/ FY09. Issue will be addressed in POM-08. Engine Surge remains a fleet safety and operational concern. Locked-in surges (compressor stalls) force in-flight shutdowns of this single engine trainer to clear the stall. 419 surge events and 41 in-flight shutdowns have occurred since 1993. A flight test program for one solution is nearing completion but deemed only 50% effective. A more complete and proven solution is a modification to the Hot Section with incorporation of a Full Authority Digital Electronic Control (FADEC). A PR07 issue sheet addresses Engine Surge funding requirements. Required Avionic Modernization Program (RAMP) is an avionics upgrade of T-45A to T-45C specifications and averts T-45A groundings due to obsolescence issues. RAMP is fully funded. Contract award is expected 2qtr FY05 and modifications will commence FY07. Synthetic Radar is not in production till FY07 but currently lacks a stable technical baseline and consequently a long term P31 plan. Program execution begins in FY06.

## PROCUREMENT APN-3

Dollars (TY\$M)	FY06	FY07	FY08	FY09	FY10	FY11
BES06	296.2	287.8	30.0	0.0	0.0	0.0
PR07	296.2	287.8	65.0	0.0	0.0	0.0
Delta:	0.0	0.0	(35.0)	0.0	0.0	0.0

Prod. Quantities	FY06	FY07	FY08	FY09	FY10	FY11
BES06	9	9	0	0	0	0
PR07	9	9	0	0	0	0
Delta:	0	0	0	0	0	0

## PROCUREMENT APN-5

Dollars (TY\$M)	FY06	FY07	FY08	FY09	FY10	FY11
BES06	49.6	38.5	42.4	33.2	33.9	34.5
PR07	49.6	57.9	48.4	33.2	33.9	34.5
Delta:	0.0	(19.4)	(6.0)	0.0	0.0	0.0

## PROCUREMENT APN-6

Dollars (TY\$M)	FY06	FY07	FY08	FY09	FY10	FY11
BES06	10.2	4.8	0.0	0.0	0.0	0.0
PR07	10.2	4.8	0.0	0.0	0.0	0.0
Delta:	0.0	0.0	0.0	0.0	0.0	0.0

# TH-57 Program Health Assessment

92

- **Description:** TH-57 provides primary and advanced Helicopter flight training for student aviators (USN, USMC, USCG and foreign military pilots).
- **Pending Decisions/Milestones:** None.
- **Requirements Issues:** None
- **Basis of current budget cost:** NAVAIR 4.2 Business Case Analysis.
- **Status Summary:** Required Cockpit Modernization Program (including Safety upgrades) to begin in FY07. All issues are green with the exception of Funding. All components are Commercial-Off-The-Shelf (COTS) items that have been FAA certified in the TH-57 commercial equivalent. Funding is yellow because this is a currently unfunded PR-07 issue.

PROCUREMENT APN-3

Dollars (TY\$M)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
BES06		0.0	0.0	0.0	0.0	0.0	0.0
PR07		0.0	0.0	0.0	0.0	0.0	0.0
Delta:		0.0	0.0	0.0	0.0	0.0	0.0

Prod. Quantities	FY05	FY06	FY07	FY08	FY09	FY10	FY11
BES06		0	0	0	0	0	0
PR07		0	0	4	12	24	24
Delta:		0	0	(4.0)	(12.0)	(24.0)	(24.0)

PROCUREMENT APN-5

	FY05	FY06	FY07	FY08	FY09	FY10	FY11
		0.0	0.0	0.0	0.0	0.0	0.0
		0.0	2.5	7.0	7.1	10.9	11.0
		0.0	(2.5)	(7.0)	(7.1)	(10.9)	(11.0)

PROCUREMENT APN-6

	FY05	FY06	FY07	FY08	FY09	FY10	FY11
		0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0

PM

# T-44A Program Health Assessment

93

- **Description:** The T-44A Pegasus is a twin-engine, pressurized, fixed-wing, five-place aircraft. The primary mission of the 54 T-44A aircraft assigned to CNATRA and located at NAS Corpus Christi, TX is to train student naval aviators to fly multi-engine turbo-prop aircraft.
- **Pending Decisions/Milestones:** None.
- **Requirements Issues:** T-44A Obsolescence Issues (Stall Warning System Replacement, Wing Rewire, and Pressurization System Refurbishment) is a PR-07 issue and #3 on the OAG unfunded priority list. T-44A Visual System Upgrade is a PR-07 issue and #4 on the OAG unfunded priority list.
- **Basis of current budget cost:** BES-06
- **Status Summary:** OSIP 05-04 funds the T-44A replacement of obsolescent avionics with a Commercial Off the Shelf (COTS) digital avionics suite. Replacement avionics suite will have an FAA Supplemental Type Certificate (STC) for installation in the T-44A. Avionics Upgrade Cost, Schedule, and Performance is **Green**.

PROCUREMENT APN-5 (OSIP 05-04)		Avionics Upgrade					
Dollars (TY\$M)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
BES06		7.9	7.7	5.4	0.0	0.0	0.0
PR07		7.9	7.7	5.4	0.0	0.0	0.0
Delta:		0.0	0.0	0.0	0.0	0.0	0.0

PROCUREMENT APN-5		Obsolescence					
Dollars (TY\$M)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
BES06		0.0	0.0	0.0	0.0	0.0	0.0
PR07		0.0	1.8	1.6	1.4	1.5	1.7
Delta:		0.0	(1.8)	(1.6)	(1.4)	(1.5)	(1.7)

REMENT APN-5&6 (VISUAL SYSTEM UPGRADE)							
Dollars (TY\$M)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
BES06		0.0	0.0	0.0	0.0	0.0	0.0
PR07		0.0	3.5	3.8	3.8	0.4	0.3
Delta:		0.0	(3.5)	(3.8)	(3.8)	(0.4)	(0.3)

PM

# T-6A Program Health Assessment

- **Description: Sea Warrior Foundation: Warfighting Effectiveness (Training/Human Systems Interface capabilities)** T6A Texan II replaces the T-34 as CNATRA Primary Trainer Aircraft.
- **Pending Decisions/Milestones:** None. Milestone III achieved. Full rate production. IOC for NFO Training obtained in JUN03, 2 months early. Pilot Training IOC (Whiting) scheduled in FY-11 and (Corpus) in FY-13.
- **Requirements Issues:** PR-07 identifies APN-5 requirements to complete retro-fits for the modifications of scheduled ECP's on the delivered 49 aircraft.
- **Basis of current budget cost: BES-06**
- **Status Summary:** 39 of 49 aircraft procured have been delivered to TRAWING-6 in Pensacola Florida (as of 1OCT04). Next procurement scheduled for FY07 (24 a/c). Possible Congressional plus-ups in FY-05/06. POM-06 "right-priced" significant engineering changes to the aircraft. Anticipate braking improvement, Traffic Avoidance System, Maritime Conversion (Life raft, UWARS), nose-wheel centering and other additional engineering changes to be made to the aircraft prior to entering FY-07 production
- PR-07 T-6 issue Sheet encapsulates the retrofit/mod line requirements for the 49 delivered aircraft.

## PROCUREMENT APN-3

<i>Dollars (TY\$M)</i>	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<b>BES06</b>		2.4	159.9	305.9	327.6	349.8	351.5
<b>PR07</b>		2.4	159.9	305.9	327.6	349.8	351.5
<b>Delta:</b>		0.0	0.0	0.0	0.0	0.0	0.0

<i>Prod. Quantities</i>	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<b>BES06</b>		0	24	48	48	48	48
<b>PR07</b>		0	24	48	48	48	48
<b>Delta:</b>		0	0	0	0	0	0

## PROCUREMENT APN-5

<i>Dollars (TY\$M)</i>	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<b>BES06</b>		0.7	1.6	1.3	1.5	1.5	1.5
<b>PR07</b>		0.7	7.6	11.2	9.3	9.8	4.0
<b>Delta:</b>		0.0	(6.0)	(9.9)	(7.8)	(8.3)	(2.5)

## PROCUREMENT APN-6

<i>Dollars (TY\$M)</i>	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<b>BES06</b>		0.0	3.8	7.8	7.1	7.2	4.9
<b>PR07</b>		0.0	3.8	7.8	7.1	7.2	4.9
<b>Delta:</b>		0.0	0.0	0.0	0.0	0.0	0.0

# T-34C Program Health Assessment

- **Description:** T-34C aircraft are used by CNATRA for primary flight training of student aviators (USN, USMC, USAF, USCG, Foreign Military Pilots, NFOS). Additional aircraft are located at 9 satellite sites supporting Fleet Replacement and Test Facilities. The program is commercially supported through a turnkey maintenance contract and sole source sustaining engineering contract with the OEM.
- **Pending Decisions/Milestones:** None.
- **Requirements/Issues:** Naval Aircraft Collision Warning System (NACWS) is obsolete and requires replacement.
- **Basis of current budget cost:** NAVAIR PMA273 Cost estimate.
- **Status Summary:** The T-6A is the follow on replacement aircraft for T-34. The T-6 is in place at NAS Pensacola and starts replacing T-34 at NAS Whiting FY-08 and NAS Corpus FY12. Combined T-34/T-6/T-44 follow on CLS contract scheduled to begin 01OCT05. Required replacement for obsolete Naval Aircraft Collision Warning System(NACWS) summarized in PR-07 Issue sheet.

## PROCUREMENT

<i>Dollars (TY\$M)</i>	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<b>BES06</b>		0.0	0.0	0.0	0.0	0.0	0.0
<b>PR07</b>		0.0	4.7	4.3	0.0	0.0	0.0
<b>Delta:</b>		0.0	(4.7)	(4.3)	0.0	0.0	0.0

# TC-12B Program Health Assessment

96

- **Description:** The TC-12B Huron began supplementing the T-44 student/pilot training syllabus in FY00. There are currently 25 TC-12's in the CNATRA inventory. The TC-12 is a high-performance, fixed wing, pressurized, twin engine turboprop aircraft that accommodates places for a pilot, co-pilot and passengers. The primary mission of the TC-12 is to train student naval aviators to fly multi engine turbo prop aircraft in day/night familiarization, basic instruments, radio instruments, formation and airways/cross-country flight indoctrination. The secondary mission is to transport passengers and/or cargo. Due to the differences in the cockpits, once a student starts the syllabus in a TC-12 they have to finish in the TC-12.
- **Pending Decisions/Milestones:** None.
- **Requirements Issues:** The TC-12 Common Cockpit Upgrade is a PR07 issue and #2 on the unfunded OAG priority list.
- **Basis of current budget cost:** BES-06
- **Status Summary:** PR07 issue sheet submitted.

Dollars (TY\$M)	PROCUREMENT						
	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<b>BES06</b>		0.0	0.0	0.0	0.0	0.0	0.0
<b>PR07</b>		0.0	5.8	9.1	5.8	0.0	0.0
<b>Delta:</b>		0.0	(5.8)	(9.1)	(5.8)	0.0	0.0

PM



# T-39G/N Program Health Assessment

97

- **Description:** T-39G/N aircraft prepare USN/USAF/FMS MFOs for tactical aircrew assignments. The aircraft are located at CTW-6 in Pensacola. T-39G (6 aircraft) conduct cross country, airways navigation, NATOPS flights. The T-39N (15 aircraft) are equipped with APG-66 radar, and perform TACNAV, RIO, low-level flights
- **Pending Decisions/Milestones:** None.
- **Requirements Issues:** n/a
- **Basis of current budget cost:** n/a
- **Status Summary:** Performance is green. There are no PR07 issues. Current program focus is on wing fatigue life studies to increase expected life. Expected FLE gains will allow for complete inventory to stay in service through FY08, at which point the inventory begins to decrease if the wings are not replaced. Requirements are currently being defined for NFO training in the future.

		PROCUREMENT					
<i>Dollars (TY\$M)</i>	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<i>BES06</i>		0.0	0.0	0.0	0.0	0.0	0.0
<i>PR07</i>		0.0	0.0	0.0	0.0	0.0	0.0
<i>Delta:</i>		0.0	0.0	0.0	0.0	0.0	0.0

PM

# T-2C Program Health Assessment

- **Description:** T-2C performs aircraft combat maneuvering training for MFOs at CTW-6 (17 aircraft), and flying qualities and performance at Navy Test Pilot School to include dissimilar aircraft familiarization, spin training (7 aircraft), and flight test and evaluation at VX-20 (1 aircraft)
- **Pending Decisions/Milestones:** None.
- **Requirements Issues:** n/a
- **Basis of current budget cost:** n/a
- **Status Summary:** Performance is green. There are no PR07 issues. Current program focus is support of aircraft at NAS, Pensacola through planned retirements, which depending on requirements definition for future NFO training, could happen as early as FY08. Plans for divesting the US Navy Test Pilot School T-2 aircraft with T-6A aircraft are being discussed.

<i>Dollars (TY\$M)</i>	PROCUREMENT						
	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<i>BES06</i>		0.0	0.0	0.0	0.0	0.0	0.0
<i>PR07</i>		0.0	0.0	0.0	0.0	0.0	0.0
<i>Delta:</i>		0.0	0.0	0.0	0.0	0.0	0.0

# T-45 F405 Engine Surge/Flameout

PMA273T45FY04-001

**PROGRAM:** PMA-273 **BLI:** 056900 **PE:** 0804745N **CL:** 48  
**PEO:** A

**SEAPOW 21 PILLAR:** Sea Warrior/Sea Enterprise **MCP:** War Fighting Effectiveness **CAPABILITY:** Trainer

**CNATRA PRI LIST:** 10 **PR-05 ISSUE:** No **POM-06 ISSUE:** No

**WAS THIS ISSUE MARKED IN POM-06:** No

**REQUIREMENT:** ENGINE SURGE MITIGATION. Over 419 documented T-45 engine surges have resulted in 41 In-flight shut-downs in 500K+ flights. Engine surges resulting in In-flight shut-downs are a Critical Safety Hazard (C,2) for this single engine aircraft. The T-45 aircraft is required for service into year 2035.

APN-5 (\$M)	FY06	FY07	FY08	FY09	FY10	FY11	FY06-FY11	TO COMP
<b>FUNDED</b>	3.300	3.300	4.000	4.000	4.100	4.200	22.900	3.900
<b>QTY (If Applicable)</b>	0	0	0	0	0	0	0	0
<b>REQUIRED</b>	3.300	22.700	10.000	4.000	4.100	4.200	48.300	3.900
<b>QTY (If Applicable)</b>	0	0	0	40	50	55	57	0
<b>DELTA</b>	0.000	(19.400)	(6.000)	0.000	0.000	0.000	(25.400)	0.000

**SEAMS :** \$439M Cost Avoidance CNATRA OP20 engine overhaul money with Rolls Royce -

**STATUS:** Initial testing of airframe inlet solution is deemed only 50% effective. Hot Section replacement with Full Authority Digital Electronic Control (FADEC) fuel control system is the complete surge solution and includes modification to engine, airframe, and fuel control system. Consequently, original Engine Surge OSIP (03-03) requires restructuring with additional engineering funding in FY07/08 to completely resolve Critical Safety Hazard via the Hot Section replacement and FADEC fuel control system.

**SHORTFALL/IMPACT:** Left unresolved, System Safety predicts engine surge will result in one aircrew fatality and loss of 3 aircraft during T-45 program life. Risk of single engine trainer aircraft having to perform an engine shutdown in flight is unacceptable (41 since 1996). Incorporation of Hot Section and FADEC fuel control system resolves Critical Safety Hazard.

**RETURN ON INVESTMENT:** NAVAIR 4.2 BCA indicates Non-Discounted Cost Avoidances of \$439M (\$TY) over the life of the program. Hot section and FADEC improvements provides a positive \$75M Net Present Value (NPV) with

# TH-57 Cockpit Modernization

100

PMA273T57FY04-001

**PROGRAM:** PMA-273 BLI: 054900 PE: 0804742N CL: 40 PEO: A  
**SEAPOWER 21 PILLAR:** Sea Warrior/Enterprise **CAPABILITY:** Training **CNATRA PRI LIST:**  
4

**MCP:** War Fighting Effectiveness

**Sea Warrior -- Optimal Employment**

**Sea Enterprise -- Technology Exchange/Material and Aircrew Safety Assurance**

**PR-05 ISSUE:** Yes **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06: NO**

**REQUIREMENT:** This modernization effort capitalizes on technology improvements by increases aircrew survivability and situational awareness while providing a fleet representative digital cockpit configuration and initial pilot NVG training.

**PMA-273 ENABLERS (SUB-ISSUES) /DEPLOYMENT YEAR:**

**PMA273T57FY04001a Exceedence Warning System/FY09**

**PMA273T57FY04001b Energy attenuating Seats/FY09**

**PMA273T57FY04001c Digital Cockpit/FY09**

**PMA273T57FY04001d Night Vision Cockpit/FY09**

## Total Funding Required

(Roll-Up of all TH57 Modernization for complete upgrade)

APN-5 (\$M)	FY06	FY07	FY08	FY09	FY10	FY11	FY06-FY11	TO COMP
FUNDED	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QTY (If Applicable)	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REQUIRED	0.000	2.474	7.020	7.081	10.893	11.029	38.497	32.688
QTY (If Applicable)	0	0.000	4.000	12.000	24.000	24.000	64.000	59.000
DELTA	0.000	(2.474)	(7.020)	(7.081)	(10.893)	(11.029)	(38.497)	(32.688)

# TH-57 Exceedence Warning System

PMA273T57FY04001a

**PROGRAM:**  
**PEO: A**

**PMA 273**    **BLI: 054900**

**PE: 0804742N**

**CL: 40**

**SEAPOW 21:** Sea Warrior/Sea Enterprise    **MCP:** War fighting Effectiveness    **CAPABILITY:** Trainer

**CNATRA PRI LIST: 1**    **PR05 ISSUE:** Yes    **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06: N**

**REQUIREMENT:** Reduce the number of over torques, over temps, and underspeed landings

<u>FUNDING(\$M)</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>TO COMP</u>	<u>TOTAL</u>
FUNDED		0.000	0.000	0.000	0.000	0.000	0.000	0.000
FUNDED QTY		0.000	0.000	0.000	0.000	0.000	0.000	0.000
REQUIRED		0.165	0.364	0.264	0.460	0.450	1.302	3.005
REQUIRED QTY			4.000	12.000	24.000	24.000	59.000	123.000
DELTA		(0.165)	(0.364)	(0.264)	(0.460)	(0.450)	(1.302)	(3.005)

**STATUS:** The TH-57 helicopter community suffers from numerous over torques and over temperature starts. These incidents result in lost training time and aircraft availability. Prior to an exceedence this warning system will prompt the pilot to lower the collective and reduce power demands on the engine which reduces torque and temperature.

**SHORTFALL/IMPACT:** A warning system of this type may save aircraft from being struck by increasing pilot awareness and prompting a correct response in time to recover the aircraft. Procurement of a FAA Certified Exceedence Warning System is a cost-effective method of reducing helicopter training costs and increasing aircraft availability.

**RETURN ON INVESTMENT:** Not calculated separately; included in Cockpit Modernization

# TH-57 Energy Attenuating Seats

102

PMA273T57FY04001b

**PROGRAM:**  
**PEO: A****PMA 273**    **BLI: 054900****PE: 0804742N****CL: 40****SEAPOW 21:** Sea Warrior/Sea Enterprise    **MCP:** War fighting Effectiveness    **CAPABILITY:** Training**CNATRA PRI LIST:** 1 PR05 **ISSUE:** Yes**POM-06 ISSUE:** Yes**WAS THIS ISSUE MARKED IN POM-06: N****REQUIREMENT:** Reduce the severity of aircrew injury during aircraft hard landing.

<b>APN-5 (\$M)</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY08</b>	<b>FY10</b>	<b>FY11</b>	<b>TO COMP</b>	<b>TOTAL</b>
<b>FUNDED</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>QTY (If Applicable)</b>	0	0	0	0	0	0	0	0
<b>REQUIRED</b>	0.000	1.048	0.330	0.821	1.676	1.709	4.764	10.348
<b>QTY (If Applicable)</b>	0	0	4	12	24	24	59	123
<b>DELTA</b>	0.000	(1.048)	(0.330)	(0.821)	(1.676)	(1.709)	(4.764)	(10.348)

**STATUS:** The current TH-57 seat system does not offer controlled energy attenuation in the event of a hard landing. In 1991 NADC reported that the TH-57 seat system had "significant deficiencies". The Army TH-67 was purchased with an FAA approved energy attenuating seat system. The Army is in the process of retrofitting other Bell Helicopter derivative aircraft with the same system. Purchase of the existing TH-67 energy attenuating system is the most cost effective method of providing added protection to the aircrew

**SHORTFALL/IMPACT:** The TH-57 aircrew is at increased risk due to the lack of protection from the existing TH-57 seat design. NAVAIR ALSS OAG has ranked energy attenuating helicopter seats issue #4 to #2 since 1991. TH-57 mishaps in January 2001 and August 2002 resulted in 5 aircrew back injuries due to impact accelerations. Energy attenuating seats would have significantly reduced these aircrew injuries. The installation of attenuating seats adds 42 lbs. Digital cockpit weight savings are required for seat installations.

**RETURN ON INVESTMENT: Not calculated separately; included in Cockpit Modernization****Interdependencies:** TH-57 Digital Cockpit

# TH-57 Digital Cockpit

PMA273T57FY04001c

**PROGRAM:** PMA 273 **BLI:** 054900 **PE:** 0804742N **CL:** 40  
**PEO:** A

**SEAPOW 21:** Sea Warrior/Sea Enterprise Training **MCP:** War fighting Effectiveness **CAPABILITY:**

**CNATRA PRI LIST:1** **PR05 ISSUE:** Yes **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06:** N

**REQUIREMENT:** Conform to Fleet digital cockpit environment.

<u>APPN-# (\$M)</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>TO COMP</u>	<u>TOTAL</u>
<b>FUNDED</b>		0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>QTY (If Applicable)</b>		0	0	0	0	0	0	0
<b>REQUIRED</b>		0.495	5.133	4.870	7.783	7.460	21.612	47.353
<b>QTY (If Applicable)</b>		0.000	4.000	12.000	24.000	24.000	59.000	123.000
<b>DELTA</b>		(0.495)	(5.133)	(4.870)	(7.783)	(7.460)	(21.612)	(47.353)

**ISSUE:** The Navy/Marine helicopter community is quickly transitioning to digital cockpits (MH-60S, SH-60R, AH-1Z, UH-1Y, MV-22 IOC 02-05) Primary training transition to T-6 will result in students beginning in digital, going to analog in TH-57, then back to digital at the FRS. Training students in a modern helicopter digital cockpits provides significant savings by allowing training at NATRACOM vs. FRS (Lower flight hour costs).

**SHORTFALL//IMPACT:** Procurement of a FAA certified digital cockpit system for the TH-57 is the most cost-effective method of providing consistent helicopter training while reducing overall training costs to the Navy. Digital cockpit weight savings required for attenuating seat installations.

**RETURN ON INVESTMENT:** Not calculated separately; included in Cockpit Modernization

**Interdependencies:** TH-57 Attenuating Seats, TH-57C Night Vision Cockpit

# TH-57C Night Vision Cockpit

PMA273T57FY04001d

**PROGRAM:** PMA 273 **BLI:** 054900  
**PEO:** A

**PE:** 0804742N

**CL:** 40

**SEAPOW 21:** Sea Warrior/Sea Enterprise  
**CAPABILITY:** Training

**MCP:** War fighting Effectiveness

**CNATRA PRI LIST:1** **PR05 ISSUE:** Yes **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06: N** **REQUIREMENT:** Reduce the cost to train pilots by offloading night vision goggle training from expensive fleet aircraft.

<u>APPN-#(\$M)</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>TO COMP</u>	<u>TOTAL</u>
FUNDED		0.000	0.000	0.000	0.000	0.000	0.000	0.000
QTY (If Applicable)		0.000	0.000	0.000	0.000	0.000	0.000	0.000
REQUIRED		0.203	0.618	0.539	0.784	0.799	3.106	6.049
QTY (If Applicable)		0.000	4.000	12.000	24.000	24.000	59.000	123.000
DELTA		(0.203)	(0.618)	(0.539)	(0.784)	(0.799)	(3.106)	(6.049)

**ISSUE:** The Navy/Marine helicopter community operates in the NVG environment. Currently primary helicopter training does not address any form of night vision goggle training. Performing this initial student training in fleet assets incurs a higher cost to the Navy fleet due to the higher fleet flight hour cost when compared to the TH-57C. Modification of the TH-57 provides significant savings by allowing training at NATRACOM vs. FRS (Lower flight hour costs and/or time to train).

**IMPACT:** Pilots will continue to use higher cost fleet assets to perform their initial NVG training. Purchase of a FAA certified night vision cockpit system for the TH-57 is the most cost-effective method of providing night vision helicopter training while reducing the Navy's overall training costs.

**RETURN ON INVESTMENT:** Not calculated separately; included in Cockpit Modernization

**Interdependencies:** TH 57 Digital Cockpit



# T-6A Oil Pressure Caution

**PMA273T6FY04001b**

**PROGRAM:** PMA 273 **BLI:** 057100 **PE:** 0804745N **CL:**50 **PEO:**  
(A)

**SEAPOWERS 21:** Sea Warrior **MCP:** War Fighting Effectiveness **CAPABILITY:** Trainer **CNATRA**  
**PRI LIST:**

**PR05 ISSUE:** Yes **POM-06 ISSUE:** Yes

## WAS THIS ISSUE MARKED IN POM-06

APN-5 (\$M)	FY06	FY07	FY08	FY09	FY10	FY11	FY06-FY11	TO COMP
<b>REQUIREMENT:</b> Add oil pressure caution light into aircraft warning system for retrofit aircraft.								
FUNDED	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QTY (If Applicable)	0	0	0	0	0	0	0	0
REQUIRED (APN-5)	0.000	1.214	1.167	0.000	0.000	0.000	2.381	0.000
QTY (If Applicable)	0	25	24	0	0	0	49	0
DELTA	0.000	(1.214)	(1.167)	0.000	0.000	0.000	(2.381)	0.000

**STATUS:** Production funded beginning in FY-07. Retrofit unfunded. High safety risk.

**SHORTFALL/IMPACT:** Safety of flight issue. Aircraft without oil pressure caution light will be more susceptible to in-flight engine failures due to loss of oil pressure. Impacts the material and readiness and material/aircrew safety assurance WRT Sea Enterprise future readiness capabilities. Ensures common configuration for entire T-6A Fleet.

**RETURN ON INVESTMENT:** Increases Mean Time Between Engine Failures.

# T-6A NACWS Replacement

**PMA273T6FY04001d**

**PROGRAM:** PMA 273 **BLI:** 057100 **PE:** 0804745N **CL:**50 **PEO:**  
(A)

**SEAPOWER 21:** Sea Warrior **MCP:** War Fighting Effectiveness **CAPABILITY:** Training

**CNATRA PRI LIST:** **XX** **PR05 ISSUE:** Yes **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06**

**REQUIREMENT:** Replace obsolete T-6A Naval Aviation Collision Warning System (NACWS) with retrofit FAA approved Traffic Avoidance System. ASN RD&A response to Congressional Interest Item.

APN-5 (\$M)	FY06	FY07	FY08	FY09	FY10	FY11	FY06-FY11	TO COMP
<b>FUNDED</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>QTY (If Applicable)</b>	0	0	0	0	0	0	0	0
<b>REQUIRED (APN-5)</b>	0.000	1.091	1.960	2.885	3.710	0.000	9.646	0.000
<b>QTY (If Applicable)</b>	0	5	12	16	16	0	49	0
<b>DELTA</b>	0.000	(1.091)	(1.960)	(2.885)	(3.710)	0.000	(9.646)	0.000

**STATUS:** FY-07 and out production aircraft are funded in POM-06. Current system is unusable in FY06 (Pensacola) and FY08 (Corpus). Current FAA system upgrades change the ATC radar rotation speed and PRF making NACWS unusable. Impacts the material and readiness and material/aircrew safety assurance WRT Sea Enterprise future readiness capabilities.

**SHORTFALL/IMPACT:** Joint ORD requirement. Safety of Flight Issue. No usable anti-collision warning system increases risk of mid-air collisions in the highly-saturated airspace at CNATRA training sites. Failure to fund replacement system will negatively impact training safety, airspace efficiency, and system supportability.

**RETURN ON INVESTMENT:** Standard USN/USAF configuration management.

# T-6A Braking Improvement

**PMA273T6FY04001a**

**PROGRAM:** PMA 273 **BLI:** 057100 **PE:** 0804745N **CL:**50 **PEO:** (A)

**SEAPOWER 21:** Sea Warrior **MCP:** War fighting Effectiveness **CAPABILITY:** Training

**CNATRA PRI LIST:** **XX** **PR05 ISSUE:** Yes **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06:**

**REQUIREMENT:** Improve JPATS short field braking performance. Retrofit required for 49 T-6 aircraft.

<u>APN-5 (\$M)</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY06 - FY11</u>	<u>TO COMP</u>
<b>FUNDED</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
<b>QTY</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>REQUIRED</b>	<b>0.000</b>	<b>2.477</b>	<b>2.838</b>	<b>3.624</b>	<b>2.361</b>	<b>0.000</b>	<b>11.300</b>	<b>0.000</b>
<b>QTY</b>	<b>0</b>	<b>6</b>	<b>16</b>	<b>16</b>	<b>11</b>	<b>0</b>	<b>49</b>	<b>0</b>
<b>DELTA</b>	<b>0.000</b>	<b>(2.477)</b>	<b>(2.838)</b>	<b>(3.624)</b>	<b>(2.361)</b>	<b>0.000</b>	<b>(11.300)</b>	<b>0.000</b>

**STATUS:** Production funded. Retrofit unfunded

**SHORTFALL/IMPACT:** Current braking system is inadequate for CNATRA out-lying-fields runway lengths and wet conditions. Multiple braking configurations will impact training/operations/maintenance requirements and can adversely impact safety.

**RETURN ON INVESTMENT:** Cost avoidance: Facility improvements, damaged aircraft, increased time to train, and premature tire replacement.

# T-6A Maritime Conversion

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**PMA273T6FY04001c**

**PROGRAM:** PMA 273 **BLI:** 057100 **PE:** 0804745N **CL:**50 **PEO:**  
A

**SEAPOW 21:** Sea Warrior **MCP:** War Fighting Effectiveness **CAPABILITY:** Training

**CNATRA PRI LIST:** 11 **PR05 ISSUE:** Yes **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06:** No

**REQUIREMENT:** APN-5 retrofit money required to retrofit T-6A with Universal Water-Activated Release System (UWARS) and a life raft. Impact on Sea Power 21 Sea Enterprise future readiness and Warfighter Effectiveness on training/human systems interface. Provide Aviation Life Support Systems that are compatible with Navy standard flight gear.

<b>APN-5 (\$M)</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY06 - FY11</b>	<b>TO COMP</b>
<b>FUNDED</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
<b>QTY</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>REQUIRED (APN-5)</b>	<b>0.000</b>	<b>0.993</b>	<b>0.732</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>1.725</b>	<b>0.000</b>
<b>QTY</b>	<b>0</b>	<b>20</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>0</b>
<b>DELTA</b>	<b>0.000</b>	<b>(0.993)</b>	<b>(0.732)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>(1.725)</b>	<b>0.000</b>

**STATUS:** Production funded, Retrofit funded.

**SHORTFALL/IMPACT:** Introduction of the installed on the parachute risers is required for aircrew safety in the event of an over-water ejection. Safety of Flight issue.

**RETURN ON INVESTMENT:** Standard USN/USAF configuration management..

# T-44A OBSOLESCENCE ISSUES

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## (Stall Warning/Pressurization/ Wiring)

PMA273T44FY04001

**PROGRAM:** PMA-273 **BLI:** 054900 **PE:** 080472N **CL:** 40 **PEO:** A**SEAPOW 21 PILLAR:** Sea Warrior/Sea Enterprise **MCP:** War Fighting Effectiveness **CAPABILITY:** Training**CNATRA PRI LIST:** 6 **PR-05 ISSUE:** Yes**POM-06 ISSUE:** Yes**WAS THIS ISSUE MARKED IN POM-06:** N

**REQUIREMENT:** STALL WARNING: The existing T-44A AOA system provides stall warning capability. These computers are being returned non-repairable and parts are becoming scarce. In addition, Rosemont, the manufacturer of the AOA computer, has advised that they will no longer repair these computers.

PRESSURIZATION: The T-44 aircraft experiencing pressurization problems attributed to aging pipe connections and seals. WIRING: The NAVAIR Wiring System Team identified the T-44A aircraft wiring, outside the pressure vessel has deteriorated to an unacceptable state and is becoming difficult to maintain. Current Navy long range plans call for the continued use of the T-44A aircraft until FY08.

APR-5 (SM)	FY06	FY07	FY08	FY09	FY10	FY11	FY06-FY11	TO COMP
FUNDED	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QTY (If Applicable)	0	0	0	0	0	0	0	0
REQUIRED (Stall Warning)		0.536	0.193				0.729	
QTY (Stall Warning)		27	27				54	
REQUIRED (PRESSU/WIRING)		1.296	1.389	1.425	1.464	1.743	7.317	0.000
QTY (Press/Wiring)		10	11	11	11	11	54	0
DELTA	0.000	(1.832)	(1.582)	(1.425)	(1.464)	(1.743)	(8.046)	0.000

**STATUS:** Unfunded

**SHORTFALL/IMPACT:** Continued AOA failures will result in grounding of aircraft and degrade CNATRA's ability to meet Pilot Training Requirements(PTR). NRE and prototype required in FY-07 to avoid PTR impacts in FY-08. Project 13 aircraft grounded in FY-08, and an additional 13 aircraft grounded per year due to lack of stall warning capability. To ensure continued safe operation, wing wiring must be replaced. Degradation of wing wiring could result in exposed bare wires which could result in a wing fire and possible loss of aircrew and aircraft.

Pressurization system refurbishment is required to maintain aircraft availability and flexibility. Forty-eight T-44A aircraft are not currently capable of meeting the Original Equipment Manufacturer 4.4 psi pressurization capability.

# TC-12B Cockpit Upgrade<sup>110</sup>

## PMA273TC12FY04001

**PROGRAM:** PMA-273 **BLI:** 056200 **PE:** 0804742N **CL:** 19 **PEO:** (A)  
**SEAPOWER 21 PILLAR:** Sea Warrior **MCP:** War Fighting Effectiveness **CAPABILITY:** Training  
**CNATRA PRI LIST:** 5 **PR-05 ISSUE:** Yes **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06:** N

**REQUIREMENT:** A Cockpit Upgrade Program will permit integration of aircraft systems required for safety of flight such as Mode S Transponder, Traffic Collision Avoidance System (TCAS), Ground Proximity Warning System (GPWS) and enhanced radar / terrain mapping. The CNATRA 21 Vision requires a common cockpit configuration for T-44A/TC-12 to standardize multi-engine training and meet the customer's requirement for a seamless transition to the Fleet as an increasing number of follow on aircraft have digital cockpits.

<u>APN-5 (\$M)</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY06-FY11</u>	<u>TO COMP</u>
<b>FUNDED</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>QTY (If Applicable)</b>	0	0	0	0	0	0	0	0
<b>REQUIRED</b>	0.000	5.808	9.122	5.751	0.000	0.000	20.681	0.000
<b>QTY (If Applicable)</b>	0	3	12	10	0	0	25	0
<b>DELTA</b>	0.000	(5.808)	(9.122)	(5.751)	0.000	0.000	(20.681)	0.000

**STATUS:** Unfunded

**SHORTFALL/IMPACT:** The TC-12 Cockpit Upgrade was established after a DOD initiative required the upgrade of flight safety systems in all C-12 aircraft. Funding in the amount of \$9.9M was included in C-12 OSIP 14-98 for 21 TC-12 flight safety upgrades, but was inadvertently zeroed out during OPNAV divestiture realignments. If the cockpit upgrade is not funded, safety of flight upgrades will not be integrated into the TC-12 and the CNATRA 21 requirement for a T-44A/TC-12 common cockpit configuration will not be met. The Fleet's requirement for a seamless transition from trainer to maritime pipeline will be degraded.

**Interdependencies:** This requirement includes funding required to mod Simulators.

# T-34C NACWS Replacement

## PMA273T34FY04001

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**PROGRAM:** PMA-273 **BLI:** 054900 **PE:** 0804742N **CL:** 40 **PEO:** A

**SEAPOW 21 PILLAR:** Sea Warrior/Sea Enterprise **MCP:** War Fighting Effectiveness **CAPABILITY:** Training

**CNATRA PRI LIST:** 8 **PR-05 ISSUE:** Yes **POM-06 ISSUE:** Yes

**WAS THIS ISSUE MARKED IN POM-06:** N

**REQUIREMENT:** Replace the obsolete Naval Aviation Collision Warning System (NACWS)

APN-5 (\$M)	FY06	FY07	FY08	FY09	FY10	FY11	FY06-FY11	TO COMP
FUNDED	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QTY (If Applicable)	0	0	0	0	0	0	0	0
REQUIRED	0.000	4.680	4.258	0.000	0.000	0.000	8.938	0.000
QTY (If Applicable)	0	144	81	0	0	0	225	0
DELTA	0.000	(4.680)	(4.258)	0.000	0.000	0.000	(8.938)	0.000

**STATUS:** Current NACWS is inaccurate, and does not meet mandated system requirements due to FAA upgrade to ATC radar sites. Specifically, the NACWS system is incompatible with new FAA ASR-9 radar, and exhibits an MTBF significantly less than required. Available system software and/or hardware upgrade/modification options are cost-prohibitive, and do not meet requirements. Market Survey complete, follow on system identified and ready for prototype.

**SHORTFALL/IMPACT:** Critical Safety of Flight Issue. Current system does not meet congressionally sanctioned system requirements and must be replaced. Safe operations in high-density CNATRA training airspace are compromised, putting pilots at increased risk of mid-air collision. Failure to replace current system may result in loss of life or aircraft and negatively impact training safety, airspace efficiency, and system supportability. Current replacement options are available to meet system performance requirements at significant overall cost and weight savings relative to the current NACWS.

**RETURN ON INVESTMENT:** N/A

# T-44 Simulator (2F129) Visual Systems Upgrade

**PROGRAM:** PMA 273 BLI: 054900 PE: 0804745N CL: 40 PEO: A  
**SEAPOWER 21:** Sea Warrior/Sea Enterprise MCP: Warfighting Effectiveness **CAPABILITY:** Training  
**CNATRA PRI LIST:** 7 **PR-05 ISSUE:** No **POM-06 ISSUE:** No  
**WAS THIS ISSUE MARKED IN POM-06?:** No

**REQUIREMENT:** The T44 trainer (2F129) requires a visual system as well as TCAS and Weather RADAR simulations in order to migrate student flight events to simulator events.

<u>APN-5 (\$thousand)</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY06-FY11</u>	<u>TO COMP</u>
<b>FUNDED</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>QTY (If Applicable)</b>	0	0	0	0	0	0	0.000	0
<b>APN 5 Requirement</b>	0.0	3,482.0	3,782.3	3,786.2	395.0	255.0	11,700.5	0.0
<b>QTY (If Applicable)</b>	0	1	2	2	0	0	5	0
<b>DELTA</b>	0.0	(3,482.0)	(3,782.3)	(3,786.2)	(395.0)	(255.0)	(11,700.5)	0.0

**STATUS:** The T44 aircraft is not anticipated to be replaced in the near future. A visual system incorporated on the T44 simulator can offload training objectives from the flying curriculum as a cost-wise means of conserving O&S funds by reducing flight hours.

**SHORTFALL/IMPACT:** Without full funding, the student flight hour program will not be reduced. Cost avoidances will be realized in T-44 flight training with the addition of a full field-of-view simulator visual system with TCAS and Weather RADAR simulations. CNO has dictated that simulation initiatives be investigated due to decreases in flight hour budgets.

**RETURN ON INVESTMENT:** Reduction of 8 flight hours per student from the T-44 aircraft to the T-44 Operational Flight Trainer (OFT). Return on Investment (ROI), which is the ratio of operational cost of the T-44 program (through FY2025) to the investment cost of the visual system, equates to 1.8.